CONOCO

1966 SERVICE GUIDE

LUBRICATION

TUNE-UP

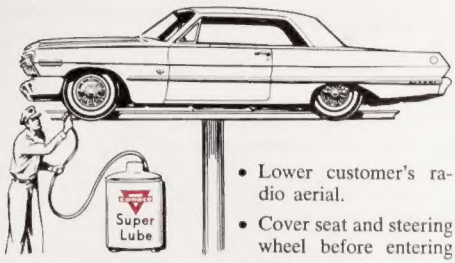
BRAKE ADJUSTMENT

technical services
CONOCO
MARKETING DEPT

GENERAL INSTRUCTIONS

FOLLOW YOUR GUIDE

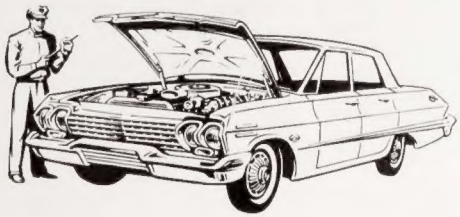
A satisfied and well pleased lubrication customer is a customer for every item you sell. Let your customer know that you have a factory approved lubrication chart for his car. Show him the chart at the pump island, at his home, and in your lubrication department. To give him this factory approved lubrication job and all those little extras your customer has a right to expect, follow this procedure:



- Lower customer's radio aerial.
- Cover seat and steering wheel before entering car.
- Raise car using correct lift adapters to support car frame. Properly position car on lift and put safety device in position.

(See LIFTING PRECAUTIONS discussion.)

- Use correct Conoco Lubrication Chart for proper application of lubricants.
- Inspect for defects in steering mechanism, muffler and exhaust pipe.



- Place fender cover over fenders.
- Lubricate under hood as specified.
- Check battery and radiator water level.
- Lubricate the body points as shown on inside front cover.
- Sweep out floor.
- Clean car windows all around.
- Fill out and install doorjamb sticker indicating services performed.
- Check to see that all lights work properly.
- Inflate tires to correct pressure.

CHART EXPLANATION

This guide has been prepared to be quickly read and easily understood. The charts are based upon inspection of cars as they leave the factory and do not include recommendations for parts that may be added later. It takes only a minute or two to check the required chart for the particular car you are lubricating.

Each chart is composed of three divisions. One section covers the lubrication service operations required at the basic lubrication period, together with certain services which should be performed at specified longer intervals. The "SPECIAL SERVICES" section indicates those necessary services for which special knowledge or equipment is required and for which additional charges are usually made.

The Tune-Up Data, which is contained on every car model page in this Guide, are arranged in the sequence in which they should be performed. Following this procedure will save time and provide the most satisfactory results.

The required equipment has been centered around the economically-priced, portable type of test equipment with which the average stationman is familiar.

The "KEY" shows the lubricants required for the proper lubrication of the chassis models covered by each chart. The symbols used are self-explanatory.

The red fitting appearing in the key and designating Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade) also appears in the position of the fittings on the car. For this service, Conoco Super Lube is preferred.

The open fitting appearing on the chart indicates that the special lubricant shown by the key is required.

The black fitting appearing in the key and designating Conoco Super Lube M appears in the position of the plug on prepacked bearings of front suspension and steering linkage assembly joints.

The open fitting appearing on the chart indicates that the lubrication point is on some models only.

A solid line "————" and arrowhead leading to any lubrication point indicates that the point is the same and receives identical treatment for all chassis models covered by the chart. A broken line "– – – – –" and arrowhead leading to any point indicates a variation in location or treatment of the lubrication point on certain models covered by the chart. A "{ CAUTION }" indicates that special stated precautions should be observed when lubricating this point.

Crankcase, Transmission and Rear Axle capacities, and the type and grade of lubricant with which each should be serviced, are shown in the boxes arranged on the left side of each chart.

LIFTING PRECAUTIONS

Always use caution when positioning a car on the lift. Where free-wheel or frame contact type lifts are used, many cars require special adapters to properly support the car frame. { CAUTION } **To prevent personal injury or car damage, the correct adapters must be used and positioned properly, as shown on applicable charts.**

The special instructions on the charts must be followed when lifting cars with air or torsion-level suspension. In addition to protecting you and the car, following these instructions will prevent air in the air suspension systems from exhausting while the car is raised. If this should occur, run the engine with suspension controls in normal positions until the car body raises to normal height before driving off the lift.

LUBRICATION

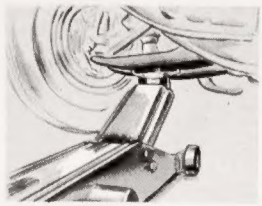
Complete Chassis Lubrication

To service all lubrication fittings and to insure complete chassis lubrication, start at the right front wheel and proceed counterclockwise around vehicle. Lubricate each fitting as recommended on chart. All fittings will be serviced when chassis has been circled.

Ball Joint Lubrication

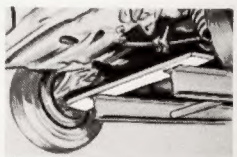
When lubricating front suspension ball joints, it is important that the car be lifted in a manner that will unload the ball joints so that the lubricant can effectively enter the joints. The design of the front suspension dictates where the jack or lift should be placed.

When the front coil spring is mounted between the upper and lower control arms, the support must be placed under the lower control arm as close to the wheel as possible. This can be accomplished by the use of a floor jack or by placing a heavy plank across the rails of a rail-type lift to properly support the lower control arms. A small hand-operated jack can be used on the rails of a drive-on type lift.



The use of a floor jack will unload the ball joints

A sturdy plank placed across the lift rails will properly support the lower control arms



When the coil spring is mounted above the upper control arm, as it is on the Ford Falcon, Chevy II and others, the vehicle must be lifted by the frame to properly unload the joints. The normal use of the standard frame contact lift, along with the proper adapters, will satisfy this requirement.

Manufacturers' Oil Change Recommendations

Crankcase oil change interval recommendations of motor vehicle manufacturers are not shown in entirety on lubrication charts because manufacturers qualify their recommendations to cover driving conditions and weather.

In general, the crankcase oil must be changed more frequently during cold weather and for stop-and-start driving than is necessary during warm weather and for long high-speed trips. Since the average car is driven 9 to 10 thousand miles a year, the oil, in most cases, should be changed on a time, rather than mileage basis. This is especially true for the second car in a family where it is used for shopping and "suburban taxi service."

Remember: Crankcase oil change and refill service, performed more frequently, offers assured protection; ignoring oil change recommendations offers only the possibility of serious damage.

PASSENGER CARS

BUICK

Initial and subsequent oil changes should be made as follows:

1963-66—Every 60 days or 6,000 miles, whichever occurs first.

1962 and prior—Anticipated lowest temperature above +32°, every 60 days or 4,000 miles, whichever occurs first; below +32°, every 30 days or 4,000 miles, whichever occurs first.

Exceptions: If there is danger of oil contamination by dust, water, or other foreign material during very extreme driving conditions, the oil should be changed more frequently.

CADILLAC

Initial and subsequent oil changes should be made as follows:

1963-66—Every 60 days but never to exceed 6,000 miles.

1962 and prior—For prevailing temperatures above +32°, every 60 days or 4,000 miles, whichever occurs first; below +32°, every 30 days or 4,000 miles, whichever occurs first.

Exceptions: If there is danger of oil contamination by dust, water, or other foreign material during very extreme driving conditions, the oil should be changed more frequently. In such cases, an engine oil change is recommended after 2,000, or even 1,000 miles of driving.

CHEVROLET

Initial and subsequent oil changes should be made as follows:

1963-66—Every 60 days or 6,000 miles, whichever occurs first. Under prolonged dusty driving conditions, it is recommended that the engine oil be changed more often.

1962 and prior—Above +32°, every 60 days or 4,000 miles, whichever occurs first; below +32° or during adverse driving conditions, every 30 days or 4,000 miles, whichever occurs first. During extreme dusty driving conditions it may be necessary to change oil more often.

CHRYSLER

Initial and subsequent oil changes should be made as follows:

1964-66—Every 3 months or 4,000 miles, whichever occurs first.

Exceptions: Severe operating conditions, such as driving on dusty roads, or in a sandy geographical area, or unusually short trip driving in cold weather may require oil changes oftener than every 3 months.

1963—OIL CHANGE INTERVALS of up to 4,000 miles are recommended. HOWEVER, SHORT TRIP OR SEVERE OPERATING CONDITIONS frequently encountered in normal driving can greatly reduce the protective life of the oil and NECESSITATE MORE FREQUENT CHANGES. For most types of driving, the oil should be changed every 2 months.

1962 and prior—Every 4,000 miles or 2 months, whichever occurs first.

Exceptions: Short-trip driving in cold weather, or driving on dusty roads can make a change of oil advisable more frequently and at times as frequent as every 500 miles.

DODGE, DODGE DART, DODGE LANCER

Same as CHRYSLER.

FORD

Initial and subsequent oil changes should be made as follows:

1962-66—Every 6,000 miles or 6 months, whichever occurs first.

Additionally, if operation is in extremely dusty areas, or for extended periods of idling, or short runs which prevent the engine from reaching normal operating temperatures, more frequent engine oil and filter changes may be required.

1960-61—Every 4,000 miles or 4 months, whichever occurs first.

Exceptions: If your car is driven often in stop-and-go traffic, on short trips or through dusty areas, service more frequently.

IMPERIAL

Same as CHRYSLER.

'JEEP'

CHANGE INTERVAL	MILES
Initial	500 or 10 hours power take-off or off-highway operation.
Average	2,000 or 50 hours power take-off or off-highway operation, except—6-cyl. 230 engine, 6,000 miles or 50 hours power take-off or off-highway operation. V-6 225 engine, 6,000 miles or 60 days. 6-cyl. 232, V-8 327 engines, 4,000 miles.

Exceptions: Change engine oil more frequently depending on type and quality of oil used, severity of operating conditions and if vehicle is driven short distances in cold weather or allowed to idle excessively.

LINCOLN CONTINENTAL

Initial and subsequent oil changes should be made as follows:

1961-66—Every 6,000 miles or 6 months, whichever occurs first.

Additionally, if operation is in extremely dusty areas, or for extended periods of idling, or short runs which prevent the engine from reaching normal operating temperatures, more frequent engine oil and filter changes may be required.

MERCURY, MERCURY COMET

Initial and subsequent oil changes should be made as follows:

1962-66—Every 6,000 miles or 6 months, whichever occurs first.

Additionally, if operation is in extremely dusty areas, or for extended periods of idling, or short runs which prevent the engine from reaching normal operating temperatures, more frequent engine oil and filter changes may be required.

1960-61—Every 4,000 miles or 4 months, whichever occurs first.

Exceptions: More frequent changes are required under abnormal driving conditions, such as consistent high speeds in high temperature areas, extremely dusty areas, or frequent low speeds and engine idling periods in low temperature areas.

OLDSMOBILE

Initial and subsequent oil changes should be made as follows:

1966—Change engine oil every 60 days even though less than 1,000 miles have been driven. If more than 6,000 miles are driven in a 60-day period, change oil every 6,000 miles.

OLDSMOBILE Continued

1963-65—Every 60 days or 6,000 miles, whichever occurs first.

1962 and prior—Prevailing daylight temperature above +32°, every 60 days or 4,000 miles, whichever occurs first; below +32°, every 30 days or 4,000 miles, whichever occurs first.

Exceptions: Certain driving conditions, such as dust storms and frequent driving on dusty roads, necessitate more frequent oil changes.

PLYMOUTH, PLYMOUTH-VALIANT

Same as CHRYSLER.

PONTIAC, PONTIAC TEMPEST

Initial and subsequent oil changes should be made as follows:

1963-66—Every 60 days or 6,000 miles, whichever occurs first.

When driving on dusty roads, in dust storms or during extreme driving conditions which include long periods of engine idling, the oil should be changed more frequently to prevent the danger of oil contamination.

1961-62—Every 60 days above +32°, every 30 days below +32° or every 4,000 miles, whichever occurs first.

1958-60—Above +32°, 60 days; below +32°, 30 days; never to exceed 4,000 miles, or 1,000 miles under dusty conditions.

Exceptions: 1958-61, adverse driving conditions, such as short trip winter driving (less than 10 miles average per trip), makes it advisable to change oil every month. Similar short trips in the summer make it advisable to change oil every two months.

RAMBLER

Initial and subsequent oil changes should be made as follows:

Favorable conditions (over 10 miles average per trip) every 4,000 miles; summer (over +32° average), less than 10 miles average per trip every 2,000 miles; winter (below +32° average), less than 10 miles average per trip every 1,000 miles. For dusty driving conditions every 1,000 miles.

For cars not equipped with an engine oil filter, all mileages shown above should be reduced by one half.

STUDEBAKER

Initial and subsequent oil changes should be made as follows:

1965-66—Every 60 days or 6,000 miles, whichever occurs first. Regardless of mileage, oil should be changed every 60 days above 0°, every 30 days below 0°.

1964—Every 6,000 miles or 60 days.

1963, and 1962 with full-flow oil filter—Every 4,000 miles.

1962 without full-flow oil filter, and prior years—Every 2,500 to 3,000 miles.

Exceptions: Severe operation, dust-bowl driving, and other unusual circumstances may make more frequent oil changes necessary.

1963 and prior years—Regardless of mileage, oil should be changed every 30 days during winter (temperatures below +32°), every 60 days during summer (temperatures above +32°).

VOLKSWAGEN

CHANGE INTERVAL	MILES
Initial	300
Average	3,000

Exceptions: In extreme dust conditions, or stop-and-go operation, or operation during extreme cold weather, change oil every 1,500 miles.

LIGHT TRUCKS

CHEVROLET All, ex. Corvair 95

Initial and subsequent oil changes should be made as follows:
1964-66—Every 60 days or 6,000 miles, whichever occurs first.
1962-63—60 days or 4,000 miles.
1961 and prior—60 days or 2,000 miles.
Exceptions:
1963-66—Under unfavorable driving conditions such as frequent long runs at high speeds and high loads, driving under severe dust conditions, and short runs in cold weather which promote accumulation of moisture condensation in the crankcase, it becomes necessary to drain the oil more frequently. For heavy-duty operation involving continuous start-stop or prolonged idling, engine oil should be changed after 2,500 to 3,000 miles.
1962 and prior—Frequent long runs at high speed, or continuous driving with heavy loads . . . Driving over dusty roads or through dust storms . . . Short runs in cold weather, such as city driving, and excessive idling . . . While no definite drain periods can be recommended under these conditions, they should be more frequent than under normal driving conditions.

Corvair 95 Same as shown for "Chevrolet" in passenger car section.

DODGE

Initial and subsequent oil changes should be made as follows:
All 1965-66 models and 1964 A-100—Every 3 months or 4,000 miles, whichever occurs first, or 50 hours.
1963-64 except 1964 A-100—Every 2,000 miles or 50 hours.
1962 and prior—Every 2,000 miles.
Exceptions: WINTER DRIVING—If the truck is driven for short distances of only a few miles at a time and at low speeds, moisture will condense in the crankcase and form a sludge. Under conditions of this kind, the engine does not become sufficiently warm to expel the condensation through the crankcase ventilating system; therefore, the oil should be changed approximately every 500 miles (1963-66, 1,000 miles) and under extreme conditions more often than every 500 miles (1963-66, 1,000 miles).

DODGE Continued

DUSTY CONDITIONS—Driving over dusty roads or through dust laden air greatly increases the problem of keeping abrasive materials out of the engine. Under these conditions . . . the engine oil and oil filter, or oil filter element should be changed more frequently. The frequency will depend upon the severity of the dust conditions. Therefore, no definite recommendations can be made.

FORD

Initial and subsequent oil changes should be made as follows:
1962-66 Econoline; 1964-66 F-100, F-250; 1966 P-100—Every 6,000 miles or 6 months, whichever occurs first.
Others—Every 4,000 miles or 4 months, whichever occurs first.
Exceptions: If a replacement filter other than the Ford Rotunda filter, or engine oils other than those recommended are used, more frequent engine oil and filter changes may be required.
1965-66 F-350: During light duty operation, interval may be extended to 6,000 miles or 6 months.
1962-63 models, off-highway operation, every 4,000 miles or 3 months.
If engine oil gets unusually dirty between recommended oil change periods, due to conditions under which the truck is operated, change both oil and engine oil filters more frequently to suit the particular situation.
1957-61—Every 4,000 miles.
Exceptions: More frequent draining is suggested if loading is maximum or above, if 25 per cent or more of driving is done in stop-and-go traffic, or short trips of less than 20 miles or if airborne dust exceeds suburban and paved street areas, or if industrial contamination exists. Off-highway operation, drain every 2,000 miles; every 1,000 miles extreme dust, extended idling and short run operation.

GMC

All except G-1000

Initial drain: 3,000 miles
Average drain: Every 3,000 miles or 60 days, whichever occurs first.
Exception: Where use of "DG" oil in variable or intermittent low temperature operation has resulted in sludge or varnish formation, use "DM" and drain every 3,000 miles or 30 days.

G-1000

Initial and subsequent oil changes should be made as follows:
Every 6,000 miles or 60 days, whichever occurs first.
Exceptions: For heavy-duty operation, continuous start-and-stop or prolonged idling, drain after 2,500 to 3,000 miles.

INTERNATIONAL

CHANGE INTERVAL	MILES
Initial	1,000
Average	3,000 to 4,000

Exceptions: More frequent oil changes are required depending upon the rate of oil contamination caused by extreme dusty conditions, multi-stop and cold weather operations.

'JEEP'

Same as shown for 'Jeep' in passenger car section.

CRANKCASE DRAIN

The rate at which oil deteriorates due to contaminants depends upon the type of driving conditions. The usual short-trip stop-and-go driving is recognized as the **MOST SEVERE**, and becomes still more severe in cold weather. Consistent normal-speed highway driving is the **LEAST SEVERE.**

Oil drain recommendations of car manufacturers vary considerably and are loaded with reservations and provisions based on driving conditions and weather. These recommendations, including all the exceptions, are shown on page 1. They should be used as a guide to determine the best oil drain interval for each customer.

Conoco All-Season Super Motor Oil and Conoco Super Motor Oil are both high detergent oils which exceed Automobile Manufacturers' Association MS test procedures. They will assure complete engine protection at all oil drain intervals recommended by car manufacturers.

DISTRIBUTORS

There are two important lubrication points to be considered in most distributors—the distributor shaft bearing, and the centrifugal spark advance mechanism.

Distributor shaft bearings are lubricated either by an oiler or supplied with grease through a grease cup or pressure fitting. The chart specifies the correct lubricant and service interval. Where oil is required, 4 or 5 drops of Conoco Super Motor Oil SAE No. 20-20W should be used. Some distributors are of the oil reservoir type, which require filling with SAE No. 20-20W Motor Oil at 10,000 mile intervals or at distributor overhaul. Filling is accomplished through a screw plug hole located on the shank at the base of the distributor body. Where grease cups are provided, Conoco Super Lube should be packed into the cup and the cup screwed down one turn at the interval specified.

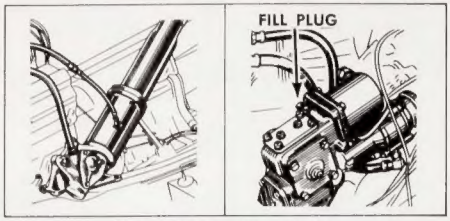
{CAUTION} Do not overlubricate distributor shaft bearings equipped with pressure gun fittings.

The centrifugal spark advance mechanism is usually lubricated through a felt wick in the top of the distributor shaft under the rotor.

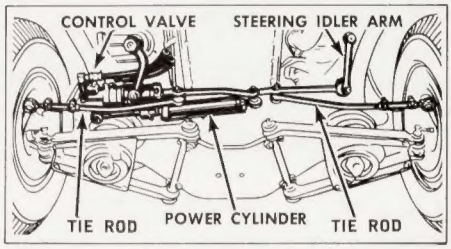
The felt under the breaker plate is lubricated through oil holes in the plate or by a drop of oil at four different places around the outer edge of the plate.

POWER STEERING

There are two types of power steering systems in use: Integral and linkage. In the integral type, the steering gear, power cylinder, and control valve are built into one unit. In the linkage type, the power cylinder and control valve are connected to the steering linkage while the steering gear is of the conventional design.



Integral type power steering



Linkage type power steering

Lubrication requirements of power steering systems:

The gear housing, on models with linkage type as well as on early design integral type, is serviced in the same manner as standard steering gears. The correct lubricant is shown on the chart for the car being serviced. Late integral type designs are automatically lubricated by the reservoir fluid and require no external filling.

In linkage type mechanisms, additional lubrication fittings may be found on the power cylinder or its attachment points.

The fluid reservoir which is located under the hood should be serviced as specified on the chart. Check the level and add recommended fluid, if required, to bring the level up to but not over the correct level indicated on the chart. **{CAUTION} Use utmost care when servicing the system to prevent dirt from getting into the reservoir. Use only absolutely clean fluid dispensers.**

UNIVERSAL JOINTS

Ball and Trunnion Type

Ball and trunnion universal joints must be disassembled and repacked periodically with Conoco Super Lube. The service intervals are shown on the chart. This service demands a qualified mechanic.

Cross and Yoke Type

FITTING-EQUIPPED —

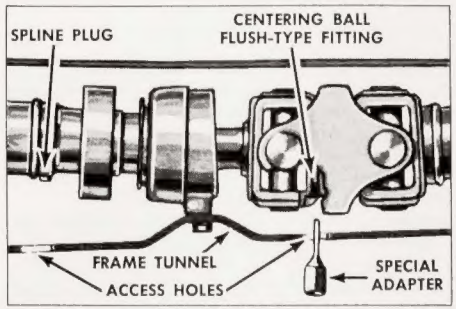
- Lubricate through fitting, usually in cross.
- Refer to chart for service interval, recommended lubricant, and whether low pressure is required.

FILL HOLE SEALED WITH SLOTTED PLUG —

- See chart for service interval, recommended lubricant.
- Remove slotted plug. Fill hole is generally located in cross.
- Inject lubricant directly into hole. Use low-pressure gun; apply lubricant slowly, sparingly.
- Replace slotted plug to maintain drive line balance.

CONSTANT VELOCITY UNIVERSAL JOINT —

This type of joint may be lubricated through a fitting or may be prepacked at assembly. The centering ball, however, may be lubricated through a flush-type fitting using a special adapter or prepacked at assembly. See chart for lubricant and service interval. On some Buicks, the constant velocity joint is mounted in the frame tunnel and it is necessary to align the flush fittings with the access hole.



Buick constant velocity joint and spline

HOUSING ENCLOSED —

No service required; lubricated from transmission.

PREPACKED WITHOUT FITTING OR FILL HOLE —

Requires disassembly and repacking with Conoco Super Lube: service easily performed by a mechanic using proper tools and procedures. Service interval is shown on chart.

REAR AXLES

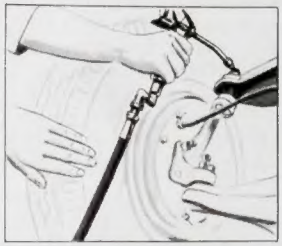
It is not normally necessary to flush a rear axle when changing the oil. If, however, because of some unusual condition it should be necessary to flush an axle, use only Conoco Super Motor Oil SAE No. 10W and do not put a load on the axle while the flushing oil is in the housing. Flushing can be done by jacking up the rear wheels and driving the rear axle for about 5 minutes. **{CAUTION} Do not run at a speed of more than 20 m.p.h., and keep a man in the driver's seat during this operation.**

Experience has proven that occasional gear failures can result from the mixing of unlike lubricants and it is far safer to drain and refill with the proper grade than to attempt the "false economy" of simply adding more lubricant to a partly filled axle housing. Conoco Universal Gear Lubricant meeting Military requirements, however, will mix satisfactorily with other Military approved lubricants.

Procedure

Follow this procedure for lubricating ball joints equipped with standard fittings.

- Lift the front of the car by the lower control arm or frame, as previously explained, to unload the ball joints.
- Wipe fittings clean, apply lubricant intermittently.
- Turn wheels from side-to-side to distribute lubricant in joints.



Apply lubricant to ball joint while turning wheels from side-to-side

- Repeat procedure at other front wheel.

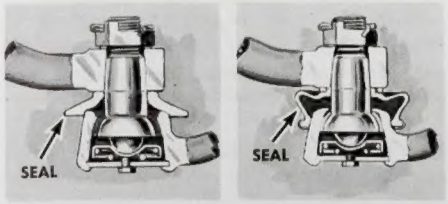
Note: The up-and-down movement of the tire and wheel assembly as the lubricant is applied is evidence that the ball joints are separating by the forceful entrance of the lubricant and does not indicate worn parts.

- Lower car to floor. Bounce car up-and-down and rock it from side-to-side several times to check for noise. If noise is heard, relubricate joints.

Lack of lubricant at the ball joints produces two distinct types of front end noise. Dry lower ball joints produce a crunching or squeaking noise as the car is slowly bounced up-and-down. Dry upper ball joints produce a snapping or cracking noise as the front end is bounced more forcibly.

Prepacked Bearings

Many late model cars are equipped with prepacked bearings at their front suspension ball joints and/or steering linkage joints. The extended mileage interval at which prepacked bearings are relubricated is made possible, in addition to changes in lubricants by the use of better rubber seals. Usually a balloon-type seal is used to replace the former umbrella-type. However, to prevent seal rupture, lubricant must be applied slowly and at low pressure because balloon-type seals do not readily allow excess lubricant to escape.



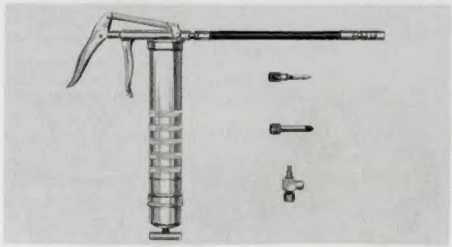
Umbrella-type *Balloon-type*

The recommended prepacked bearing service procedure and the special lubricant to be used are listed on the applicable charts.

Inspection

When a car equipped with prepacked bearings is on the lift, the seals of the bearings should be inspected for physical damage such as tears, ruptures or worn spots. Damaged seals should be replaced. Also make sure that the screw-in metal plug or press-in plastic plug is in place on every bearing.

The relubrication of prepacked bearings requires the use of a special lubrication gun and adapters. Those recommended for the Conoco Long Interval Lubrication Program are illustrated below.



Prepacked bearing lubrication adapters

Lubrication

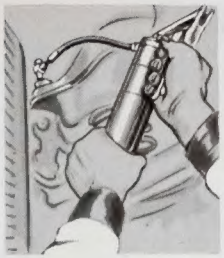
Prepacked bearings should be repacked at the interval specified on the chart or sooner if the need for lubricant is evident or the seals have been damaged permitting the loss of lubricant and the entrance of dirt.

Follow this procedure for relubricating prepacked ball joints and steering linkage joints:

- Unscrew metal plug or pry out and discard plastic plug.

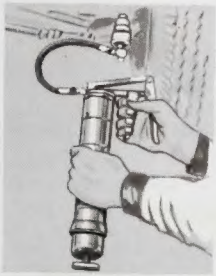
- Screw lubrication adapter into, or press rubber tip of adapter or special hand gun into, the plug hole in the bearing and apply recommended lubricant until it is visible around seal. If seal has no means to vent, inject 1 oz. while holding seal to feel how much grease is entering seal. Do not fill seal.

- Install and tighten the metal plug or press in a new plastic plug.



- Upper ball joint is serviced in the same manner as the lower joint: remove plug, lubricate, replace plug.

- Unscrew metal plug or pry out and discard plastic plug from steering linkage joint.



- Screw lubrication adapter into, or press rubber tip of adapter into lubrication hole and apply lubricant until it is visible around seal. If seal has no means to vent, inject 1 oz. while holding seal to feel how much grease is entering seal. Do not fill seal.

- Replace and tighten metal plug or press in new plastic plug.

When prepacked bearings are constructed without a provision for relubrication, the ball joint or steering linkage joint must be replaced if the joint is dry, worn or the seal is damaged.

CAPACITIES

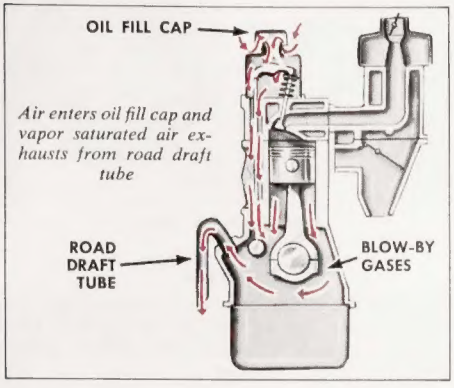
All capacities indicated on the charts in this Guide are manufacturers' stated REFILL quantities, not including accessories.

Crankcase capacities shown do not include oil filters. An additional quart of oil is usually required when the oil filter is changed.

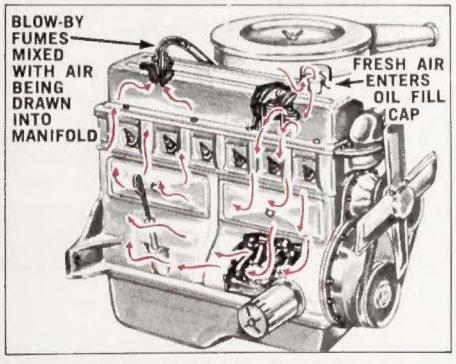
The average hot water heater increases the cooling system capacity by approximately one to three quarts as shown.

PCV SYSTEMS

While any automotive-type engine is in operation, a certain amount of the fuel and exhaust fumes pass through the piston rings and into the crankcase. Called blow-by, these fumes must be removed to prevent severe contamination of the engine oil. The traditional way is through a road draft tube leading from the crankcase. Most cars also have a fresh air inlet on the oil fill pipe. Movement of the vehicle creates a slight vacuum at the draft tube outlet under the car and a slight pressure of air under the hood around the oil fill pipe. These pressure differences draw fresh air in to ventilate the crankcase and exhaust the contaminated blow-by.



So that no contaminated air will be exhausted into the atmosphere, Positive Crankcase Ventilation (PCV) systems have been developed which recycle engine blow-by fumes back into the engine's combustion chambers where these hydrocarbons can be burned. In the state of California, where the problem of air pollution has reached national prominence, all new cars sold since 1961 have had to be equipped with a PCV system. Further evidence of the effectiveness of PCV is that most cars built in this country since the introduction of 1963 models have been so equipped.

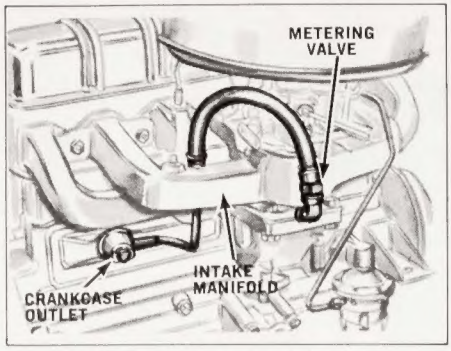


PCV system of type used on most cars

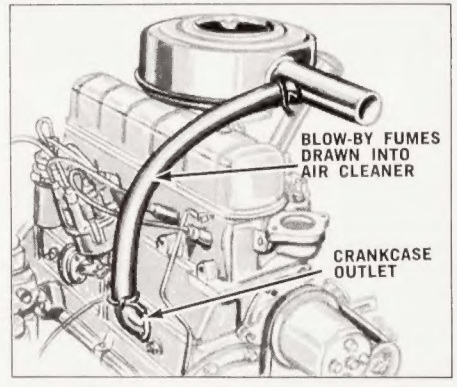
At the present time the various types of PCV systems installed as original equipment can be classified as follows:

- Systems with metering valves, installed in most cars, have the valve in a hose line between the crankcase and the intake manifold. The metering valve, controlled by the engine vacuum, regulates the flow of air through the line. Fresh air is introduced through the oil fill cap.
- Systems without valves utilize a large diameter hose which connects the crankcase outlet to the carburetor air cleaner. This system is used on many imported cars and several domestic cars.
- Closed systems which may or may not have a metering valve but all have a sealed-type oil fill cap in place of the usual ventilated type. Air enters the crankcase through a hose connected to the carburetor air cleaner.

In all open systems the oil fill cap, because it serves as a fresh air breather, is a basic part of the PCV system. For closed systems, either the carburetor air cleaner element or a separate element is used to filter crankcase ventilating air.



PCV as installed on a Studebaker engine



Rambler American PCV system without valve

Oil fill cap important to correct PCV operation

PCV systems require regular service. If the breather opening becomes obstructed or the valve becomes clogged with varnish-like deposits and fails to operate, engine performance suffers.

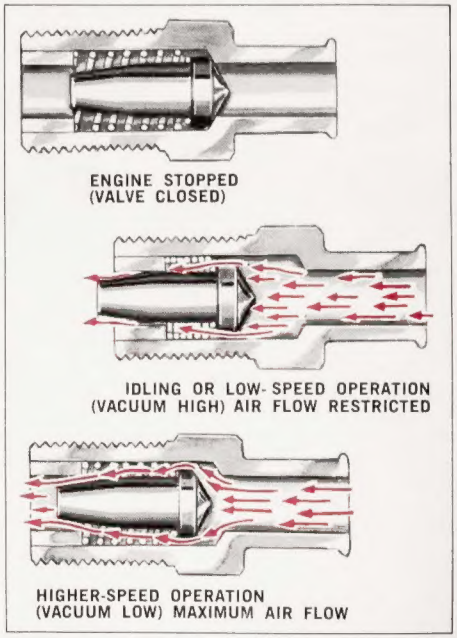
PCV service is comparatively simple. The important point is to be sure that service is not neglected. Regular service pays off for the car owner in the following ways:

- Better gas mileage because blow-by fumes are not wasted.
- Engine oil stays clean longer and needs to be replaced less often.
- Less contamination in the crankcase oil lengthens engine life.

In addition, the owner is contributing to the public interest by reducing the air pollution problem.

PCV Systems with Metering Valves

PCV systems with metering valves are similar in operation. Air entering the crankcase breather opening picks up the blow-by gases and carries them through a hose line back to the intake manifold. A valve is installed in the hose line to control the movement of air in the system at various engine speeds.



A PCV valve adjusts to control air flow

The valve restricts the flow of air in the system during engine idle and low load operation when intake manifold vacuum is high. This has a twofold purpose:

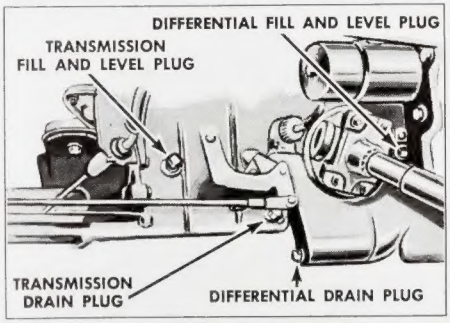
Limited-Slip Rear Axles

Many late model cars and some light trucks are equipped with a differential known generally as "limited-slip" or "locking type." This differential diverts power to the rear wheel having the most road traction virtually eliminating loss of vehicle movement and control caused by the spinning of one rear wheel under slippery driving conditions. Rear axles with this differential should be drained in the usual manner and refilled with Conoco Universal Gear Lubricant.

TRANSMISSIONS

Because gear shifting mechanisms are sensitive to reactions of too heavy oil at low temperatures, it is important to USE THE CORRECT SEASONAL GRADE as recommended.

When changing the transmission lubricant in a conventional or overdrive transmission or a combined transmission and differential (transaxle) used in Chevrolet Corvair and some Imported cars, drain while the oil is hot. Allow the unit to drain for several minutes and refill with the proper lubricant. Replace the fill plug and run the engine to distribute the lubricant. Stop the engine and allow the lubricant to settle and then remove the fill plug and drain to plug level or add lubricant as necessary. Replace all plugs. Some units have two fill and/or two drain plugs.



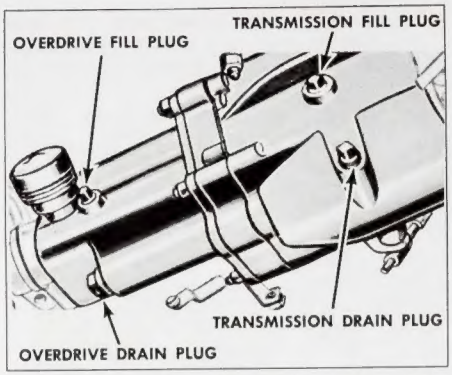
Corvair transaxle

Overdrive Transmissions

Overdrive transmissions are used to permit a reduction of engine speed in relation to car speed. The mechanism consists, in general, of a planetary gear set and free-wheeling unit built into the transmission or contained in a separate housing attached to the rear of the transmission.

The overdrive is lubricated by oil contained in the overdrive or transmission housing, and because the planetary gears act as a "centrifuge," a well-refined, stable oil is required. Conoco Super Motor Oil or Conoco Universal Gear Lubricant of the proper SAE grade as shown on each chart is recommended.

The oil should be changed according to seasonal requirements to assure satisfactory response of the mechanism. Some units are fitted with separate drain and fill plugs. Such units should be checked for oil level on both transmission and overdrive housings.



Manual transmission and overdrive service plugs

For units that are filled through the transmission plug only it is important to fill slowly and recheck the level in both transmission and overdrive after a few minutes operation to be certain that oil has reached the overdrive housing.

Automatic Transmissions

Automatic Transmissions are intricate mechanisms made up of many precisely machined, closely fitted parts. This is especially true of the control body and valve assembly. The smallest contamination of dirt or grit in the transmission fluid can cause malfunction of the control valves resulting in erratic performance or total failure of the transmission. It is therefore most important to use extreme care to prevent the entrance of dirt, lint, or other foreign matter into the transmission while servicing.

Most automotive manufacturers specify the use of a qualified Type A, "Suffix A," fluid in Automatic Transmissions. Conoco Automatic Transmission Fluid Type A, is qualified and approved as a "Suffix A" fluid for passenger car automatic transmissions. **{CAUTION} Do not flush automatic transmissions.**

Do not use any type of sealing compound when installing pipe plugs, drain plugs, or gaskets on automatic transmissions.

Use only Conoco recommended fluids. Should fluid leakage due to seal be encountered, Conoco Seals-It, a seal conditioner, added as directed, may expand and soften the seal to stop the leak.

For Step-by-Step Level Check and Drain and Refill Procedures, see pages 11 and 12.

SPECIAL SERVICES

AIR CLEANERS
CRANKCASE BREATHERS

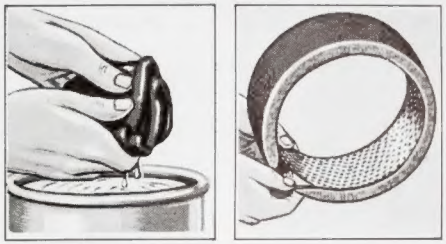
The carburetor air cleaner should be serviced at the mileage interval shown on the chart. This service interval is for normal conditions. If operating in dust conditions, service frequently depending upon the severity of contamination. Procedures for servicing various types of air cleaners are as follows:

Wire Gauze Type

The removable element should be washed in kerosene or solvent, dried thoroughly without use of compressed air, and reoiled with Conoco Super Motor Oil SAE No. 50.

Polyurethane Type

The element should be carefully removed from the mesh support, washed in kerosene or solvent, and squeezed dry. It should then be dipped in Conoco All-Season Super Motor Oil SAE No. 10W-30, squeezed gently to distribute and remove excess oil.



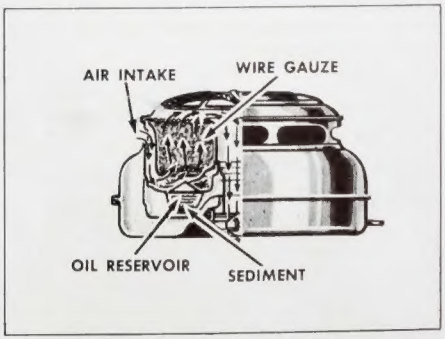
Polyurethane air cleaner

Dry Type

Generally, no service is recommended because the paper element may be damaged by improper handling and cleaning. The element should be replaced at intervals shown on chart.

Oil Bath Type

The air cleaner should be removed from the carburetor and the element washed in kerosene or solvent and dried. The reservoir should be drained of old oil and sediment and wiped clean, then refilled to the level mark with the grade of Conoco Super Motor Oil shown on the chart.

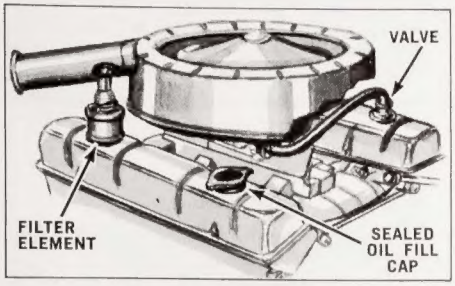


Oil bath air cleaner

Crankcase Breather

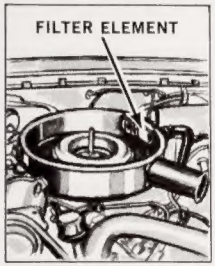
Crankcase breather air cleaners usually incorporated in the oil filler cap and crankcase ventilator at the breather outlet tube, require servicing at the intervals specified on the chart in a manner similar to that required by the wire gauze carburetor air cleaner.

element, some separate means is usually provided for filtering the air before it enters the crankcase. This may be a filter element on the valve cover, as for the 1964-'66 Buick or V-6 Oldsmobile, or on the side of the air cleaner housing. Other cars have a filter element inside the sealed oil fill cap to which the hose connects. All of these units must periodically be removed from the car, washed in solvent and re-oiled.

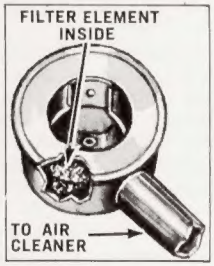


1964 Buick closed PCV system

Where the ventilation hose connects to the inside or clean side of the carburetor air cleaner filter element, no additional filter is necessary as nonfiltered air cannot reach this point. However, to protect against explosion of the fuel laden fumes in crankcase from a carburetor backfire, a flame arrester is usually used. It consists of metal gauze or a wire screen in the air cleaner or the hose and must be cleaned periodically in solvent. When the hose connects to the outside of the air cleaner element, this



Closed PCV filter element inside air cleaner



Sealed-type oil fill cap on closed PCV system

element acts as a flame arrester and no additional device is necessary.

Thus, with a "closed" system, in addition to the usual valve and hose, a second hose and either a filter element or a flame arrester must be serviced.

Testing PCV Valve-equipped Systems

The operation of any valve-equipped PCV system can be checked as follows:

1. Thoroughly warm up engine to operating temperature, preferably by operating car on street or highway.
2. Remove engine oil fill cap and run engine at idle speed.
3. No fumes should be escaping from oil fill pipe. (Escaping fumes will be visible.)
4. If fumes are escaping from oil fill pipe, a plugged PCV system is indicated. The plugged condition may have occurred in crankcase ventilator valve, the hose, or adapter fitting at carburetor or manifold. Check, too, for plugged oil fill cap.
5. A noticeably rough idle condition, due to excessive volume of air flowing into intake manifold through PCV system, is indication that valve is sticking in open or high-speed position.
6. Either squeeze the rubber hose to shut off the air supply to the engine or disconnect the hose and with your thumb, plug the end connected to the inlet manifold or carburetor. If the system is normal, a definite drop in engine speed (about 50 rpm) will result because it supplies about ¼ of the air required for the idle mixture.

Several pocket-size testers have been developed which need only be pressed over the oil fill tube while the engine idles. By the appearance of either a red or a green ball, or by the location of a single ball, these testers show whether a vacuum or a pressure exists in the crankcase. Pressure indicates a need for cleaning or replacement of the PCV valve. Another tester records pressure or vacuum by the position of a needle on a dial.

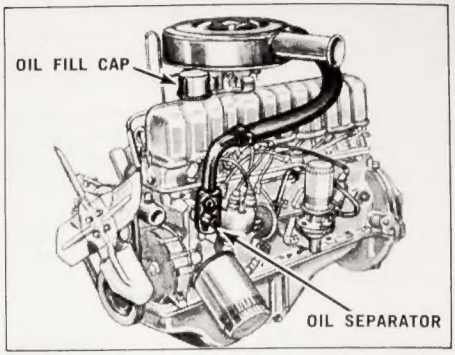
Rather than recording the pressure or vacuum, one PCV tester measures the air flow through the crankcase. The rate of flow is shown by a sliding indicator inside a tapering plastic tube. This unit must be connected in the hose line from the crankcase to the PCV valve.

Chrysler recommends shaking the valve vigorously. If the plunger is felt to move inside the valve the hissing sound of air entering the valve is heard and a strong vacuum is apparent when a finger is held over the hole in the valve, no service is needed. As a further check, reinstall the valve and with the engine idling remove the oil fill cap. Hold a stiff piece of paper over the oil fill pipe. After allowing a few seconds for crankcase vacuum to build up, the paper should hold to the filler tube with a noticeable force. If not, remove and clean or replace the valve. The hose is held in place by friction and can be removed at either end by a firm pull. Assist the pull, if necessary, by a wide-bladed screwdriver at the end of the hose.

A special testing device has been developed by AC Division to check PCV systems equipped with AC valves or any other valve except those of the diaphragm type. The tester, a pressure sensing device, operates by measuring air circulation through the crankcase ventilation system or the valve while the engine is idling. The early design (CT-1) only tested the entire system whereas (CT-2) tester can test the valve separately as well as the entire system. The tester will show green, yellow, red, or a combination of adjacent colors to indicate the condition of the PCV valve. It should be used as directed by AC.

PCV Systems without Valves

These systems, even though not equipped with valves, require periodic service and have certain peculiarities of design.



Oil separator on some 1963-64 Ford and Mercury 6-cylinder 144 and 170 engines

Ford 6

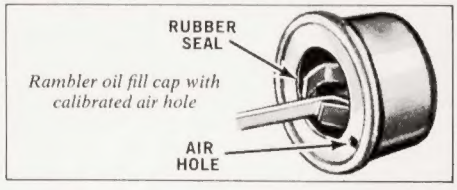
Ford recommends the following maintenance of this PCV system:

- Wash the oil fill cap in solvent or kerosene.
- Remove and clean the oil separator in solvent or kerosene.
- Clean or replace air cleaner element.

Some of these cars have been converted to either a road draft tube or valve-type PCV system as used on later production Ford 6 engines.

Rambler American

The venturi system used on 1963-'65 Rambler American, with overhead valve engine and single barrel carbuertor, has a venturi tube inserted in the snorkel of the carburetor air cleaner. The venturi tube is positioned in the snorkel to provide the energy source to draw the blow-by and ventilation air into the intake manifold. A one-inch rubber hose connects the crankcase outlet and the air cleaner snorkel tube. The oil fill cap is a restricted type with a single ventilation opening of .156-inch diameter to limit the fresh air intake.



Rambler oil fill cap with calibrated air hole

Air enters the crankcase through the oil fill cap, sweeps through the crankcase, picking up the blow-by gases, and passes through the rubber hose to the air cleaner. The blow-by gases are mixed with the inlet carburetor air and consumed in normal combustion.

American Motors recommends the following maintenance of this PCV system:

1. Wash oil fill cap in solvent.
2. If oil is found on bottom surface of air cleaner, check to be sure conventional cap has not been used in place of restricted-type cap.
3. Breather cap has neoprene seal that contacts oil fill pipe. Replace cap if seal is damaged.
4. Replace paper air cleaner element.

- To prevent an improper air/fuel ratio in the combustion chamber.
- To prevent drawing crankcase oil into the manifold.

Under lower manifold vacuum conditions—at higher engine loads—the valve opens to match the air flow capacity to the needs of the PCV system. In this way the air flow needed to handle blow-by gases is provided under all driving conditions.

At zero vacuum the valve closes to prevent a crankcase explosion that could possibly occur because of a carburetor backfire.

Service

A valve-equipped PCV system requires regular inspection and maintenance. Periodic service is needed because an accumulation of carbon and varnish can foul the valve. There are many different design PCV valves, some of which can be disassembled for cleaning; others cannot. Experience has shown that it is best to replace PCV valves rather than attempt to clean them for two reasons:

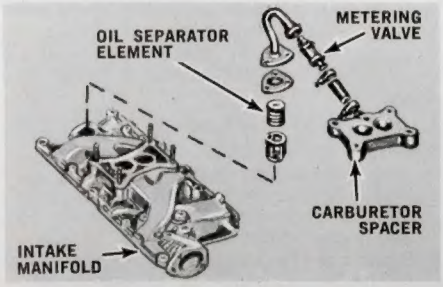
- Later design more efficient valves replace original equipment and —
- A complete cleaning job is quite difficult and the efficiency of a valve that has been cleaned does not reach that of a new valve. Service as follows:

1. Disconnect hose at valve and manifold.
2. Wash parts in solvent or kerosene. Use air gun to blow out hose.
3. Remove valve and discard or if desired, wash in carburetor cleaner. Shake valve and listen for clicking sound of plunger moving freely in housing. Note on early AC valves a small drill may be inserted into plunger orifice to remove deposits.
4. Reinstall new or cleaned valve. Be sure arrow on valve points toward intake manifold. Reinstall hose.

Ford Cars—Oil Separator Element

Some Ford-built engines have an oil separator element at the rear of the intake manifold. This assists in withdrawing all oil from the blow-by fumes thereby preventing the oil loss which would result if these fumes were to be drawn into the intake manifold and consumed in the engine.

Periodically this element should be removed, washed in solvent or kerosene and reinstalled.



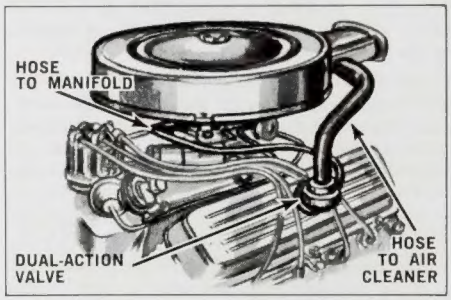
Components of PCV system on some Ford V-8 engines

Dual-flow PCV Systems

Dual-flow positive crankcase ventilation systems are used on 1963-'65 Oldsmobile V-8's and Studebaker Avanti cars as well as other 1963-'64 Studebaker models when equipped with the Avanti engine. In these systems, two tubes provide ventilation. At low engine speeds, the smaller tube, connected to the intake manifold, withdraws crankcase fumes with engine vacuum. At higher engine speeds, fumes pass through the larger tube, connected to the carburetor air cleaner, because of the pressure drop created at the air cleaner inlet.

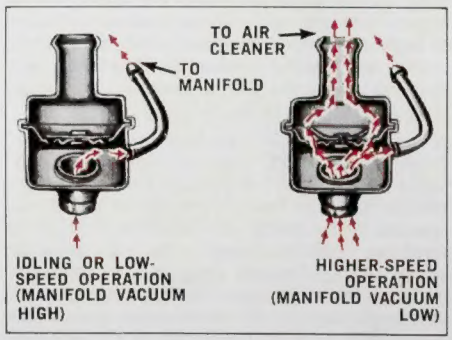
Oldsmobile

A dual-action valve is mounted in a grommet in one of the engine valve covers. The valve assembly has a flapper valve and a tube leading from the crankcase side of the assembly to the intake manifold. A fixed sized metering orifice is installed at the manifold. A ¾" I.D. hose runs from the other side of the check valve to the air cleaner inlet.



Dual-action system on 1964 Oldsmobile

Positive crankcase ventilation is assured at low car speed by the high manifold vacuum drawing the fumes through the metering orifice. Pressure drop at



Schematic view of Oldsmobile valve

the air cleaner becomes greater as car speed increases, and crankcase gases are pulled past the flapper valve into the air cleaner. Excessive air flow at high engine speed is prevented by two limiting orifices in the oil filler cap, the fresh air inlet to the engine.

Service

Service procedures are as follows:

1. Remove both hoses and connector at carburetor.
2. Clean hoses with air gun.
3. Clean carburetor connector in kerosene or solvent. Dry with air gun.
4. Use $\frac{1}{16}$" diameter wire or drill to clean bleed hole in connector. Avoid enlarging bleed hole.
5. Remove and submerge valve in kerosene or solvent, slosh around in fluid. Clean out small tubing with air gun or pipe cleaner.
6. Reinstall carburetor connector, valve assembly and hoses.

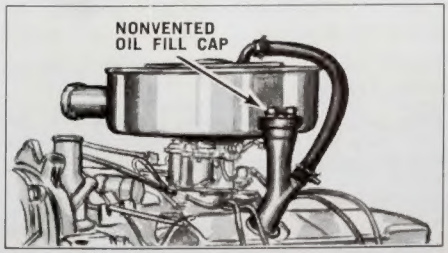
Studebaker

This system has a check valve in the small hose that must be cleaned. The service procedure to be followed is similar to that given above for Oldsmobile.

Closed PCV Systems with Valves

As engines wear, blow-by fumes increase. If they exceed the capacity of the ventilating system or the valve becomes plugged from neglected maintenance, crankcase fumes will be expelled into the atmosphere through the oil fill cap. This condition defeats the pollution control purpose of a positive crankcase ventilation system. To counteract this undesirable action, a closed-type positive ventilation system was developed. All new cars sold throughout most of California after December 1963 must be so equipped.

"Closed" systems have an oil fill cap which is sealed to prevent both the entrance of air or the exit of fumes. To ventilate the crankcase, air enters through a hose connecting the carburetor air cleaner and usually the valve cover. In the event of excessive blow-by or a malfunction of the ventilating system, crankcase fumes will back up through this hose and pass into the carburetor air cleaner from which they will be drawn into the engine and consumed.



Closed PCV system connects oil fill tube and air cleaner

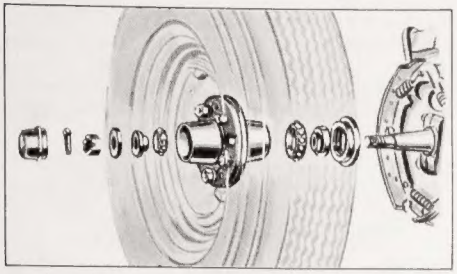
Service

The service requirements for a "closed" system vary with the manner in which this hose connects to the air cleaner. If the crankcase ventilating air is drawn from the outside or dirty side of the filter

4. Remove outer bearing and wheel by carefully pulling and shaking the wheel.

   CAUTION When removing wheel, see that outer bearing cage is not damaged.

5. Remove inner bearing. Avoid damage to grease retainer, if possible. Damaged retainers should be replaced.



Exploded view of a front wheel bearing assembly

6. Bearings and races must be thoroughly washed with kerosene. Clean all old grease out of hub and hub cap.
7. Dry bearings and races thoroughly. **CAUTION** Do not spin bearings while drying or when dry.
8. Pack bearings with Conoco Super Lube, making sure that the cavities between the balls or rollers are COMPLETELY filled with new, clean lubricant. This can be done best by using a "wheel bearing grease packer."
9. Be sure that all outer surfaces of the bearings and races have a thin coating of lubricant, approximately one-eighth inch thick. DO NOT pack the hub center with grease. Too much grease causes brake trouble or excessively high operating temperatures.
10. Replace inner bearing and grease retainer and place wheel on spindle. Reassemble outer bearing, slotted washer and wheel retaining nut.
11. Tighten wheel nut until the wheel does not turn freely, then back wheel nut off one-eighth to one-quarter turn.

    1957 and later Chrysler-line cars have a separate lock nut. After adjusting, selectively position the lock nut over adjusting nut until the spindle cotter pin hole is in approximate alignment with one set of slots in the lock nut. Back off adjusting nut, without removing lock nut, until the next slots are aligned with the cotter pin hole and insert the cotter pin.
12. Insert a new cotter pin that fits snugly, and carefully bend the ends tightly over the nut and install hub cap free of any lubricant.

Some Imported-built cars require a special puller to remove the front wheel hub and bearings. Correct installation of the grease seal requires reassembly of the inner bearing, grease seal, and seal washer in the hub before the hub is remounted on the wheel spindle.

Some rear axle designs provide automatic lubrication of rear wheel bearings by the rear axle lubricant. Some have sealed type bearings that do not require lubrication. Many have bearings which are packed at assembly and require lubrication only at infrequent intervals, approximately every 10,000 miles, necessitating removal of wheels and axle shafts.

There are many rear axles designed which provide for the external lubrication of the bearings adjacent to the rear wheel by providing a grease cup or fitting.

CAUTION Apply lubricant sparingly to avoid flooding brake drum area.

CARBURETOR CHOKE SHAFT

Late model Chrysler-built cars require periodic cleaning of the automatic choke, as follows:

1. Remove carburetor air cleaner.
2. Apply carburetor cleaner into opening in carburetor around choke piston link and to each side of choke shaft.
3. Rotate shaft repeatedly to work gum from treated surfaces.

SPEEDOMETERS AND SPEEDOMETER CABLES

Most speedometer heads do not need periodic lubrication. They should be lubricated only when the word "Speedometer" is shown in the "SPECIAL SERVICES" section of the charts. Oil must be applied sparingly to speedometer heads as overlubrication will cause inaccurate speed indication. There are two methods for applying oil to speedometer heads. One is to apply the oil directly into the oil hole above the conduit flange connection. The other method requires unscrewing a tube located horizontally to the rear of the conduit flange connection. This tube contains a felt wick which should be oiled and the excess oil quite thoroughly drained off to avoid leakage onto the floor mat. Use Conoco Super Motor Oil SAE No. 20-20W.

Speedometer Cables: All speedometer cables require periodic lubrication. The words "Speedometer Cable" will be shown in "SPECIAL SERVICES" when the cable only is to be lubricated. To service the cable, disconnect the conduit flange at the speedometer head, withdraw the cable from the conduit, apply a thin coating of Conoco Graphlube No. 30, and replace. Great care must be taken to make sure the cable ends are properly seated. On Volkswagen it is necessary to remove cotter pin from drive end in left front hub cap to release speedometer cable.

WINDSHIELD WIPER CABLES

Some windshield wiper drives employ metal cables to operate the wiper blades. When the wipers are in use, squeaking may develop at the points where the cables ride the pulleys. When this occurs, coat the cables at these points with Conoco Super Lube. Apply Conoco Super Motor Oil SAE No. 20-20W to pulley bearings.

UNIVERSAL JOINTS

For a general discussion of universal joints see page 4.

Conoco Super Lube is recommended for ALL universal joints appearing on the charts under "SPECIAL SERVICES."

PARKING BRAKE CABLES

Cable-operated parking brakes are found on many vehicles. When such cables require grease lubrication, as indicated on the charts, they should be lubricated with Conoco Graphlube No. 30 at 10,000 mile intervals. Unless fittings are provided this operation usually requires disassembly of a portion of the parking brake system or the use of special fittings and **should not be attempted unless fully equipped for this work.** In some instances, the cable conduit may be slipped back, exposing a length of the cable which should be cleaned and lubricated with a small amount of Conoco Graphlube No. 30.

The application of a few drops of Conoco Super Motor Oil SAE No. 20-20W at the point where the cable enters the conduit will suffice for the lubrication of certain cables.

BRAKE MASTER CYLINDER

Brake master cylinders, mounted on the firewall, are serviced from under the hood. Others, mounted on the frame under the vehicle, are serviced through an access hole in the floor. Service procedure for brake master cylinders are:

Clean area around fill plug to keep dirt out of reservoir.

Remove fill plug. Inspect vent hole in plug and clean if necessary. Some General Motors cars have a combination gasket and seal on the cover. Do not puncture this seal.

Check fluid level. Fill to within ½ inch of top of reservoir with Conoco Hydraulic Brake Fluid. Replace gasket and fill plug or cover.

CLUTCH MASTER CYLINDER

Follow same procedure as Brake Master Cylinder.

VACUUM CYLINDERS

Vacuum cylinders should be lubricated with Conoco Neax Oil through oil cups, plug holes or vacuum connections as indicated on the charts.

All vacuum cylinder air cleaners should be serviced periodically, usually each 10,000 miles. The air cleaner element should be removed, washed thoroughly in kerosene, dried and reoiled with Conoco Super Motor Oil SAE No. 50.

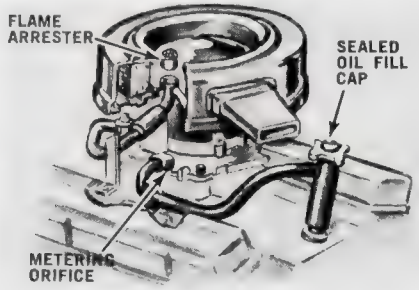
Many vacuum cylinders require partial disassembly or removal from the car for lubrication and **this work should be attempted only by an authorized service station.**

Closed PCV Systems without Valves

1964-'65 Chevrolets, 6-cylinder Pontiac Tempests and 1965 Studebakers with "closed" PCV systems have a metering orifice in place of a valve. This orifice is inside a fitting on the inlet manifold to which a rubber hose attaches. On 6-cylinder engines the rubber hose also connects to the valve cover, on V-8 engines the hose leads to the filler tube. A second hose connects the carburetor air cleaner to the crankcase as for other "closed" systems.

Service

Service consists of periodic cleaning of the metering orifice and hoses. Soak the fitting in carburetor cleaner and use a suitably sized drill, turned by hand, to clear sludge and carbon from the orifice. During this process, it is very important that the orifice diameter not be enlarged.



Chevrolet metering orifice-type PCV system

EXHAUST CONTROL SYSTEMS

To supplement PCV, car makers now are installing one of two types of systems that burn gasoline-engine exhaust fumes more completely. Use of these systems (in addition to closed PCV systems) is required by law in most 1966 and all later model passenger cars and light trucks sold in California.

CAP System

Chrysler Corp. cars made for the California market all use the *Cleaner Air Package* (CAP) system. This system burns fuel more fully *within* the engine.

Servicing

Every car with a CAP system should be given an engine Tune-Up at 12,000-mile or 12-month intervals.

Air-injection Systems

Versions of this basic system are produced independently by American Motors Corp. (as "Air-Guard"), Ford Motor Co. (as "Thermactor"), and General Motors Corp. (as "Air Injection Reactor"). An essential difference between CAP and this system is that air injection aids combustion of unburned fuel *after* it leaves the engine in the exhaust manifold.

Servicing

Engines equipped with air-injection systems need engine Tune-Up at 12,000-mile or 12-month intervals.

OIL FILTERS

Three types of oil filters are in general use today. They may be classified as the unit type, replaceable element type, or the cleanable type.

The unit type is complete within itself, and the entire unit must be replaced when servicing becomes necessary.

The replaceable element type has a filtering unit which may be removed from its container and replaced with a new one.

The cleanable type contains an element which may be removed, cleaned, and replaced.

It is well to point out to the customer that modern detergent-type oils, such as Conoco Super Motor Oil, are designed to keep the engine clean by carrying products of combustion in suspension. Some combustion products are very small and will pass through the filter, discoloring the oil. This does not necessarily mean the oil is dirty. These minute particles will do no harm to the engine and should cause no concern. Their presence in the oil simply confirms that the oil is doing the job for which it was designed.

Oil filters should be changed every 4000 to 8000 miles as specified on the chart or more often in severe service where the oil becomes extremely dark or dirty. After the filter element has been changed, start the engine and allow it to idle until lubrication is fully established; then increase engine speed and check for leaks around the filter and connections. Stop engine and check the oil level in the crankcase. It will usually take approximately 1 quart to bring the level to full.

COOLING SYSTEM

As a general rule, a quick over-all inspection of the cooling system can be made each time the car or truck comes in for oil, water, anti-freeze, or any other under hood service. This should include inspection of the radiator cap, overflow pipe, fan, water pump, air ducts, and all hose connections.

Tighten the hose clamps only enough to seal any leaks. Excessive tightening will cut into the hose and cause early failure.

When the cooling system is filled with clean water, Conoco Antirust should be added, as directed to prevent the formation of rust and scale.

Reliable anti-freeze solutions, such as Conoco Antifreeze and Coolant, contain adequate amounts of inhibitor. The use of additional inhibitor is not recommended since undesirable foaming may result.

AIR CONDITIONING

Maintenance of air conditioning equipment requires special tools and lubricants and the use of Freon, a very dangerous gas if improperly handled. For these reasons, servicing of air conditioning is usually referred to the appropriate car dealer.

However, the following cars have the heater mounted next to the air conditioning evaporator and under certain conditions the temperature of the evaporator might freeze the water in the heater core:

1957-'66 Chrysler, Imperial
1957-'66 Dodge
1957-'66 Plymouth

To prevent freezing, add sufficient Conoco Antifreeze and Coolant to form 20% of total cooling system capacity, protecting to +15°F. during summer months. Use recommended anti-freeze mixture during freezing weather as if the car was not equipped with air conditioning.

ACCESSORY DRIVE BELTS

Inspect the accessory drive belts each time the hood is raised. If a belt is frayed, cracked, or otherwise worn, a replacement should be recommended. A frayed belt can sometimes be detected, as it usually makes a thumping or slapping sound while the engine is running.

The tension of a belt can be tested by taking hold of it about half way between the two pulleys and pulling it away from the center of the engine. If it can be moved more than ¾ to 1 inch without much effort, it should be tightened. If it cannot be moved at least ½ inch, it is too tight and will cause excessive wear on the accessory bearings.

When replacing V-belts, it is extremely important to install the proper size. If the pitch is incorrect, it will not make proper contact with the pulley and premature belt failure will result.

A screwdriver should never be used to force the belt over pulleys where adjustment has not been loosened. This will not only stretch the belt but may also damage shafts, pulleys, and bearings.

WHEEL BEARINGS

Front wheel bearings and full-floating axle rear wheel bearings are lubricated by removing the wheels and bearings. **This service should not be attempted by other than competent personnel and then only when proper tools and equipment are available.**

The following procedure is given as a guide for proper lubrication of front and rear (full-floating axle) wheel bearings:

1. Jack up wheel.
2. Remove hub cap.
3. Remove dust cap, cotter pin, wheel retaining nut and washer. (1965-'66 Corvair, some '63-'66 Oldsmobiles and all Volkswagens have speedometers driven from left front wheel. Care must be taken when removing dust cap.)

STEP by STEP

DRAIN AND REFILL PROCEDURES for ALL AUTOMATIC TRANSMISSIONS

Locate the column headed with the automatic transmission you are servicing. Follow the steps in that column beginning at the top and perform the procedure shown for each step.

FOLLOW THE STEPS	Super Turbine, Turbo Hydra-Matic, Jetaway, Pontiac Tempest Automatic	'Jeep' Automatic, Flash-O-Matic, Flightomatic, International Automatic, Studebaker Truck Automatic	Dynaflow, Twin Turbine, Triple Turbine, Turbine	Fordomatic, Cruise-O-Matic, Automatic Dual Range, HD Cruise-O-Matic, Turbo-Drive, Merc-O-Matic, Multi-Drive, Comet Drive	Hydra-Matic	Loadflite, PowerFlite, Torqueflite	Buick Special Automatic, Powerglide, Turboglide, Pow-R-Flo, Tempestorque	TRANSMISSION / DRAIN AND REFILL PROCEDURES
1	●	●	●	●(5)	●	●	●	Set hand or parking brake firmly. Idle engine for several minutes to warm fluid. Stop engine.
2		●				●		Remove transmission drain plug or fill pipe.
3		●(2)	●(2)	●	●(7)	●		On models without opening, remove lower coupling or converter housing, cover or cover plates.
4		●(2)	●(2)	●	●(7)	●		Turn coupling or converter until plug can be located and removed.
5		●(4a)	●(2)	●				Turn coupling or converter until other plug can be located and removed.
6		●(2)	●(2)	●	●(7)	●(10)		Allow coupling or converter to drain completely.
7	●		●	●	●		●	Remove drain plug, oil pan or fill pipe. Allow transmission to drain completely. Use new gasket when replacing parts.
8				●		●(11)		Remove and clean oil pan and screen on Chrysler line, Dodge Truck, Ford. Use new gasket.
9	●		●		●			Buick, 'Jeep', Pontiac, remove oil pan and intake screen. Clean oil pan and wash screen in solvent. Dry parts, remove all lint and use new gaskets. Buick, Pontiac, replace filter element, if so equipped. Chevrolet, every 24,000 miles or every other fluid change, replace oil strainer.
10	●	●(1)	●	●	●	●(12)	●(13)	Replace all parts (covers, plates, plugs, etc.).
11	●	●	●	●	●	●	●	Clean area around dipstick and remove.
12					●			Clean dipstick air cleaner (if equipped) in kerosene or solvent.
13	●	●	●	●		●	●	Fill transmission to about ½ total capacity.
14					●			Fill transmission to within 2 to 3 quarts of capacity. Caution: Do not fill above full mark.
15	●(1)	●	●	●	●(8)	●	●	Idle engine. Move selector lever through all ranges.
16	P	N	P	P	N(14)	N	N(14)	Leave selector in P(park), N(neutral) position.
17						●		Add fluid until dipstick level is just below low mark.
18	●	●	●	●	●		●	Add fluid until dipstick level is just below full mark.
19	●	●	●	●	●	●	●	Continue idling engine for 2 to 5 minutes and recheck level.
20						●		Add fluid to bring level to but not above dipstick low mark.
21	●	●	●	●	●		●	Add fluid to bring level to but not above dipstick full mark.
22	●	●	●	●(6)	●	●	●	Wipe dipstick with clean cloth and replace. Stop engine.

① Pontiac: Disregard following steps—Bring fluid up to "add" mark then follow "level check" procedure.
② Buick 1962 and later, Rambler 1963 and later, omit this step.
③ 1960-'62, late 1959 Rambler 6 and 1961-'62 Rambler American, 1959-'66 Studebaker, 'Jeep' Automatic, only one plug.
④ International: Tighten converter drain plugs to 7-9 ft. lb.; 'Jeep', 7-10 ft. lb.
⑤ 1965-'66 Lincoln Continental, Thunderbird, 1966 Mercury Park Lane models, disconnect vacuum brake release line and plug end of line.
⑥ 1965-'68 Lincoln Continental, Thunderbird, 1966 Mercury Park Lane models, reconnect vacuum brake release line.
⑦ 1957-'60 Cadillac: Remove starter, then cover plate. Omit this step for all 1961-'64 Oldsmobile, some 1961-'64 Pontiac.
⑧ Hydra-Matics, park position on selector; Buick, in park position.
⑨ Hydra-Matic, park position on selector, in park position; all Lincoln, Studebaker models in drive position.
⑩ 1962 Dodge, Plymouth, Valiant and all 1963-'65 passenger cars: Remove parking sprag cavity drain plug except 1966 Plymouth, and allow to drain.
⑪ Adjustment for wear of transmission bands and shift linkage, accomplished while oil pan is removed, must be done only by qualified personnel. 1964 and later models: discard intake screen and replace with new filter-type unit.
⑫ 1962-'63 Chrysler, Imperial, Dodge and Plymouth: Replace transmission oil filter located in oil cooler line, left side of engine.
⑬ Buick Special 1961-'63, tighten oil pan bolt to 15-20 ft. lb.
⑭ Buick Special 1961-'63, park position.

AUTOMATIC TRANSMISSION SERVICE

TOOLS AND EQUIPMENT

In addition to a set of wrenches the following items are needed to be able to service all makes of automatic transmissions:

- Pair of wheel chocks
- 1-quart and 5-quart "can" type oil dispensers with flow control and flexible spout
- Flywheel turning tool
- Low-pressure oil dispenser with gooseneck or flex-tube nozzle
- Replacement gaskets for plugs and oil pan
- Remote control starter switch (Helpful, but not necessary)

TOWING CAUTION

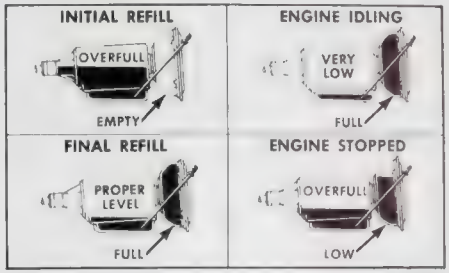
If called upon to tow a car with an automatic transmission, be sure the transmission has not been damaged and has been operated for at least 1000 miles. Place selector lever in neutral and *do not exceed 25 mph or tow the car for more than a distance of 3 miles.*

In case of transmission failure or if car must be towed more than 3 miles, tow with rear wheels off the ground or disconnect the drive shaft. Several manufacturers caution against towing by any other method.

AMOUNT OF FLUID TO ADD

The correct fluid level should always be determined by the dipstick reading rather than by any total quantity of fluid to be added. For this reason the refill capacities shown on lubrication charts are *approximate*.

Automatic transmission lubrication service includes servicing the transmission and the converter (or fluid coupling). Both are filled through the transmission. Operation of the engine for a short period of time pumps fluid from the transmission to the converter or fluid coupling. When it is completely filled, the fluid level can be correctly checked with the dipstick. Unless checked while the engine is running, or immediately thereafter, a false fluid level will be indicated as shown in the illustration below.



Fluid level in coupling or converter and transmission during various steps in draining and refilling

STEP by STEP LEVEL CHECK PROCEDURES

Locate the column headed with the automatic transmission you are servicing. Follow the steps in that column beginning at the top and perform the procedure shown for each step.

FOLLOW THE STEPS	Super Turbine, Turbo Hydra-Matic, Jetaway, Pontiac Tempest Automatic	Jeep Automatic, Flash-O-Matic, Flightomatic, International Automatic, Studebaker Truck Automatic	Dynaflow, Twin Turbine, Triple Turbine, Turbine	Fordomatic, Cruise-O-Matic, Automatic Dual Range, HD Cruise-O-Matic, Turbo-Drive, Merc-O-Matic, Multi-Drive, Comet Drive	Hydra-Matic	LoadFlite, PowerFlite, TorqueFlite	Buick Special Automatic, Powerglide, Turboglide, Pow-R-Flo, Tempestorque	TRANSMISSION / LEVEL CHECK PROCEDURES
1	●	●	●	●③	●	●	●	Set hand brake or parking brake firmly and start engine.
2	P	N or P	P	P	P⑤		N⑥	Place selector in P(park), N(neutral) position.
3	●①	●	●	●	●		●	Idle engine for several minutes to warm fluid; leave engine on.
4		●	●	●		●		Move selector through all ranges.
5		N②	P	P		N		Leave selector in P(park), N(neutral) position.
6	●	●	●	●	●	●	●	Clean area around dipstick, remove, wipe with clean cloth and replace; make sure cap is seated or clip locking dipstick in pipe.
7	●	●	●	●	●	●	●	Remove dipstick and check fluid level.
8	●	●	●	●	●		●	If needed, add fluid to bring level to, but not above, dipstick full mark.
9						●		Add fluid as required. The fluid level should check at the "F" mark, but never above the "F" mark when the engine is hot from driving the car. Add or drain fluid as necessary. If necessary to check the fluid level with the transmission cold, the level should be at the "L" or the "Add One Pint" mark.
10	●	●	●	●④	●	●	●	Replace dipstick and stop engine.

① Pontiac: To prevent serious overfilling, drive car several miles, making frequent starts and stops.
② Flightomatic except 1963-'64 6-cyl. and Studebaker Truck Automatic, in drive position; International Automatic, in park position.
③ 1965-'66 Lincoln Continental, Thunderbird, 1966 Mercury Park Lane models, disconnect vacuum brake release line and plug end of line.
④ 1965-'66 Lincoln Continental, Thunderbird, 1966 Mercury Park Lane models, reconnect vacuum brake release line.
⑤ Hydra-Matics without park position, in neutral position.
⑥ Buick Special Automatic, in park position.

WHEN TO TUNE-UP

Tune-Up should be recommended whenever an engine is hard to start, loses power and performance, or uses an excessive amount of fuel. To keep an engine operating at maximum efficiency, recommend Tune-Up on a mileage interval as well as on a seasonal basis.

Full benefits of Tune-Up will be realized when combined with other periodic services shown on the chart: air cleaner service, fuel filter replacement, manifold heat control valve lubrication, crankcase ventilator system service, crankcase drain and refill, and oil filter replacement.

Operations listed in Tune-Up Data contained on every car model page in this Guide are arranged in a logical sequence. Follow this procedure to save time and provide the most satisfactory results.

Required equipment specified below is the economically-priced, portable type of test equipment with which the average stationman is familiar.

BATTERY

The battery is tested first because it is the basic source of energy in the automotive electrical system. NOTE: Before testing, wash and/or brush corrosion from battery top; clean and tighten cable clamps.

The AABM battery group number listed in the data is a code number that indicates the battery's voltage, physical size and shape, cell arrangement, terminal post position and type of hold-down. A group number assures proper selection of a replacement battery.

Ampere-hour capacity is listed because ampere-hour rating of a replacement battery should be at least that of the original. Amp.-hr. rating must also be known to perform certain battery tests.

Most passenger car and truck models covered in this Guide are equipped with a 12-volt battery. Where a 6-volt battery is used, it is so indicated in the Data.

Dual 6-volt battery installations, used in some imported cars, are indicated by (2).

Battery Testing:

A battery may be tested for:

- *Specific gravity* with a hydrometer.
- *Cell voltage variations* by light load test with a low-reading voltmeter.
- *Capacity* with a Battery-Starter Tester.

SPECIFIC GRAVITY TEST —

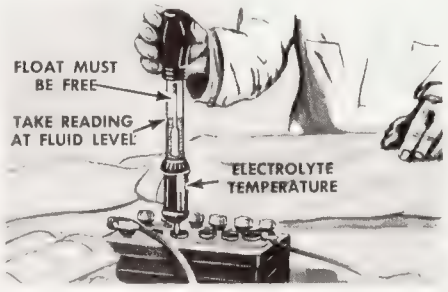
This test determines the battery state of charge. The hydrometer used measures percentage of acid in the battery solution.

If the solution has full acid strength, the battery is in a full state of charge and, unless it is physically defective, should perform well.

If the solution is weak, most of the acid has soaked into the plates. Recharging the battery will drive acid out of the plates back into the solution, restoring battery strength and working ability.

Slow charging a battery for 12 to 24 hours, or maybe more, is the best way to restore battery life without risking battery damage. The slow charge should be used in preference to fast charging wherever possible.

1. Use hydrometer to draw electrolyte from cell until float is freely suspended. Do not draw too much electrolyte.
2. Read specific gravity on float scale at point even with electrolyte level and make necessary temperature correction.



A specific gravity test indicates battery state of charge

3. A fully-charged 12-volt battery normally has a specific gravity of 1.260; a 6-volt battery has a specific gravity of 1.280.

   Replace any battery on which there is a variation of 50 points or more between cells. Recharge or replace any battery with a specific gravity of 1.220 or less.
4. Return electrolyte to cell from which it was drawn; do not spill on skin or on car finish. CAUTION: If electrolyte contacts skin, flush immediately with fresh water.
5. Add distilled or pure drinking water to the cells until level is about ⅜ inch above plates, or up to the full mark on fill wells.

CELL VOLTAGE	MAXIMUM VARIATION BETWEEN CELLS	BATTERY CONDITION
1.95 or more, all cells	Less than .05 volt	Good
Less than 1.95 for any cell	Less than .05 volt	Good, but needs charging
Less than 1.95 for all cells		Discharged. Charge and retest
1.95 or more for any cell	More than .05 volt	Defective. Replace battery

LIGHT LOAD TEST —

A light load test indicates battery state of charge and reveals internal defects.

This method of testing now is widely recommended for use on batteries with one-piece covers (those with cell connectors that pass through cell partitions, or run just over them but beneath the solid cover).

1. Connect jumper lead to distributor primary terminal and to ground.
2. Crank engine for 3 seconds.
   NOTE: Engine will not start as long as ignition coil terminal is properly grounded.
3. Turn headlamps *On* low beam for at least 1 minute.
4. With headlamps still *On*, check individual cell voltages with voltmeter. Cell readings indicate the various battery conditions described in the table at the bottom of this page.

CAPACITY TEST —

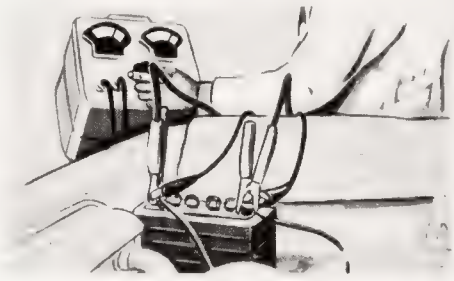
A battery at or near full charge can be tested for internal defects by a capacity test which duplicates maximum battery effort to crank a cold engine.

Commonly used to make this test is a Battery-Starter Tester, which combines an ammeter, a voltmeter, and an adjustable resistor.

A capacity test can also be made with a fixed-resistor type cell tester on batteries without a one-piece cover. The fixed resistance simulates the proper load on each battery cell.

Here are procedures for making a capacity test with the adjustable-resistor tester:

- Clip Battery-Starter Tester leads to battery terminals in proper polarity.



Conducting a battery capacity test

- Set tester control to draw battery current at a rate equal to 3 times the battery's amp./hr. rating (180 for a 60-amp./hr. battery).
- Draw battery current for 15 seconds.
- Leave tester *On* while reading voltmeter, then turn *Off* immediately. A voltage drop below 9.6 volts for a 12-volt battery, or below 4.8 volts for a 6-volt battery, indicates a defective battery which should be replaced.

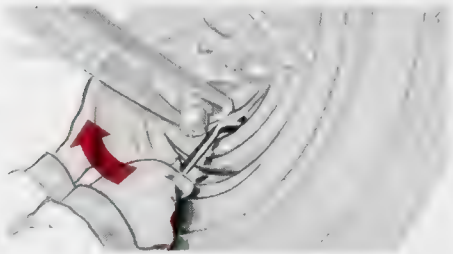
NOTE: If instructions of the tester manufacturer differ from those given here, follow the manufacturer's instructions.

BRAKE ADJUSTMENT

Minor brake adjustment is the service that compensates for the gradual wear of the brake lining.

Before starting the brake adjustment, make sure that no brake drum drag exists. This condition could be caused by a loose backing plate, an out-of-round drum, wheel bearings that are dry, defective or improperly adjusted, or defects within the brake assembly, as: broken brake shoe hold-down springs, broken or stretched brake shoe return springs or dragging parking brakes. These conditions must be corrected before brakes can be properly adjusted.

Then proceed with the brake adjustment outlined under Brake Adjustment on the chart.



Bendix and Wagner brakes are tightened by pushing up on the handle of the adjusting tool

Lockheed single-cylinder brakes are tightened by turning the adjusting cams outward

Center-Plane brakes are used on:

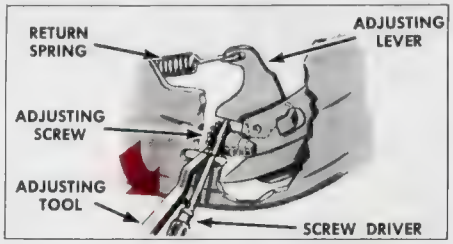
Chrysler	*1956-62*
DeSoto	*1956-61*
Dodge	*Some 1956*
Dodge	*1957-61 ex. Lancer*
Dodge	*1962 880*
Imperial	*1957-62*
Plymouth	*1957-61 ex. Valiant*

To tighten, turn adjusting cams as indicated. Cams are shown as they appear from under car

Cars with self-adjusting brakes require manual adjustment only when relining brakes or if malfunction occurs. Disc-type brakes are also self-adjusting.

When most self-adjusting, drum-type brakes require manual adjustment, as after shoe replacement, adjust the brakes as follows:

- Expand shoes in normal manner until a slight drag is felt as wheel is turned.
- Insert a thin blade screw driver or ice pick through adjusting slot and push adjusting lever away from adjusting screw.
- Back off brake adjustment until drum turns freely without drag.



Self-adjusting brakes are loosened by pushing down on the adjusting tool while relieving the adjusting lever tension

- Operate car in reverse and apply brakes several times to finalize adjustment.

Some self-adjusting brakes require a special procedure, as shown on the chart.

To adjust parking brakes:

- Release parking brakes.
- Check cable slack at center of cable. Normal slack is about 2 inches of movement.
- Adjust cable, as required, with adjusting nut at equalizer bar.

Note: If cable action is sluggish due to rust between cable and conduit, remove rust and lubricate cables.

BRAKE BLEEDING

Brake adjustment will not provide efficient braking if air has entered the hydraulic system. The presence of air is indicated by a "spongy" feeling of the brake pedal when the brakes are applied. The air must be removed from the system by a process called "brake bleeding" before the brakes will function efficiently.

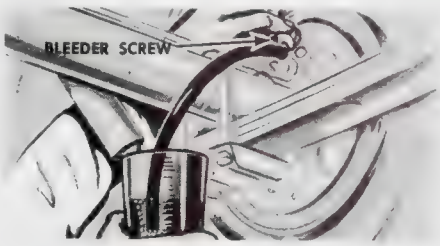
To accomplish the bleeding operation with the greatest thoroughness and in the least time, the wheel cylinders, including those on disc-type brakes, should be bled in the order listed under Bleeding Sequence. This sequence will also include the power brake, master cylinder or hill-holder when applicable.

The use of a brake pressure tank will enable the bleeding operation to be performed easily by one man. In its absence, the system can be bled by two men, one man slowly operating the brake pedal and keeping the master cylinder filled with brake fluid while the other man bleeds the wheel cylinders.

Some late model cars are equipped with a dual master cylinder which contains two fluid reservoirs. Each reservoir may have its own fill cap or a single common cover may be used. Fluid from one reservoir is used for the front brakes and fluid from the other reservoir is used for the rear brakes. BE SURE to keep both reservoirs filled with fluid during the bleeding operation.

The brake bleeding operation for most systems is conducted in the following manner:

1. Clean top of brake master cylinder, remove fill plug(s) and fill cylinder(s) with Conoco Hydraulic Brake Fluid.
2. Remove dust cap from bleeder screw of wheel cylinder that is first in bleeding sequence and screw fitting of bleeder hose into dust cap hole.
3. Place lower end of bleeder hose in glass jar partly filled with brake fluid. Keep end of hose submerged in fluid at all times during bleeding operation to prevent air from being drawn back into wheel cylinder.
4. Loosen bleeder screw about ¾ turn. With pressure applied to brake pedal, fluid will flow into glass jar washing with it air that was trapped in brake line and wheel cylinder. Close bleeder screw and release brake pedal. Continue bleeding operation until fluid flows in a solid stream without presence of air bubbles.



Bleeding the hydraulic brake system

5. Securely tighten bleeder screw, remove bleeder hose and replace dust cap.
6. Refill master cylinder.
7. Repeat bleeding operation at each wheel in recommended sequence. Refill master cylinder after each wheel cylinder is bled.
8. Refill master cylinder to correct level.

NEVER re-use fluid removed from a brake system. This fluid contains contaminants that makes it unfit for further use.

If the fluid removed from a brake system during bleeding is discolored, it is advisable to continue to bleed the entire system until it is completely flushed with clean fresh fluid. Approximately 1 quart of fluid will be required for flushing most systems.

Chrysler Corporation recommends a complete disassembly and overhaul of the brake system when an inspection of the brake fluid reveals presence of dirt or evidence of contamination.

Hydraulic brake system flushing fluids are also available for cleaning the brake system. Be sure to follow the manufacturer's recommendations for its use.

IGNITION POINTS

Ignition points serve as an electrical rotary switch in the ignition primary circuit. Proper point operation is vital to efficient engine operation, so defective points must be replaced.

Insufficient ignition point gap causes hard starting and poor low-speed performance. Excessive point gap causes high-speed miss and poor acceleration.

Recommended gap and dwell specifications are listed in the Data. Follow these service procedures:

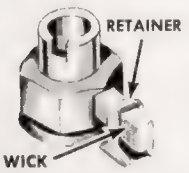
Inspect and Adjust:

- Remove distributor cap. Wipe inside and outside of cap with a clean cloth. Replace cap if it is cracked or chipped, if insides of towers are corroded, or if terminals are burned or eroded. Also replace rotor if cap is replaced.

- Remove rotor. Inspect for cracks or breaks, burned and corroded tip, and for loose contact spring. Replace rotor if defective. Also replace cap when replacing rotor.
- Inspect point condition. Replace points if pitted or burned, or if the breaker arm rubbing block is worn.

Inspect condition of points and breaker arm rubbing block

- Inspect condition of cam lubricator, if so equipped. Gently squeeze base of wick retainer with long nose pliers, remove lubricator, turn end-for-end and replace lubricator on breaker plate. Adjust squarely with wick just touching distributor cam.

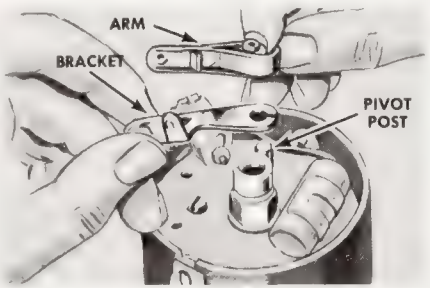


Adjust lubricator squarely with wick just touching lobe of cam

- Reset points to specifications with a dwell meter. Do not use a feeler gauge.
- Place drop of oil on breaker point pivot post.
- Apply thin film of cam lubricant to distributor cam.
- Install new rotor and cap.
- Check ignition timing and reset as required.

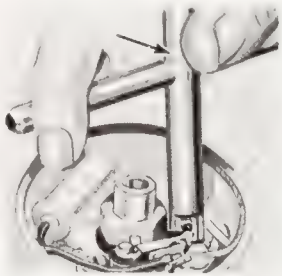
General point replacement procedure:

1. Loosen primary terminal nut, remove screw holding points to breaker plate, loosen breaker arm spring and lift arm assembly off pivot post. Lift stationary point bracket off breaker plate. Remove condenser attaching screw and lift out condenser.



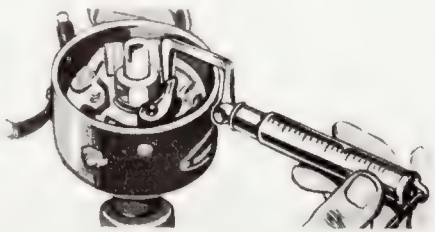
Lift breaker point arm and bracket off pivot post

2. Wipe breaker plate and distributor cam with clean cloth.
3. Position new stationary point support assembly over pivot post and adjusting screw. Insert and snug down lock screw. Lightly coat pivot post with motor oil. Install movable breaker arm pivot over post. Hook breaker arm spring over attaching terminal. Install new condenser. Tighten terminal nut. (Preassembled breaker point sets are installed as an assembly.)



Gently bend the stationary point support to align the points

4. Align contact points by carefully bending stationary point support. Do not bend the movable arm. Points should contact squarely.



Using a scale to check breaker point spring tension

5. Measure point spring tension with scale; adjust tension as required to meet specifications.

   Breaker point spring tension specifications, in general, are as follows:

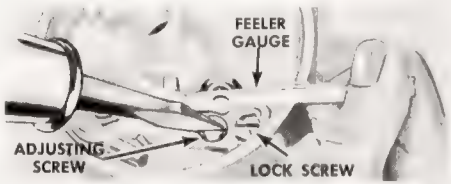
Autolite	17-20 ounces
Bosch	16 ounces
Delco	19-23 ounces
Lucas	18-24 ounces
Prestolite	17-20 ounces

   Preassembled breaker points are point-aligned and tension adjusted at time of manufacture.

6. Adjust breaker point spacing by setting gap with feeler gauge or by setting dwell angle with dwell tester (except Delco external-adjustment type distributors).

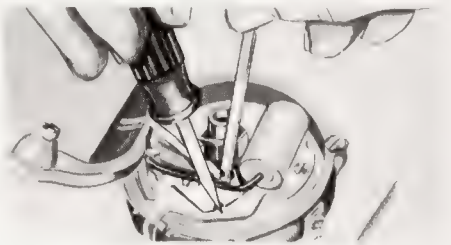
To set point gap, proceed as follows:

- Bump engine with starter until breaker arm rubbing block is on high point of cam lobe. This position provides maximum point opening.



Setting point gap by turning eccentric adjusting screw

- Turn eccentric adjusting screw, or shift breaker plate, to obtain gap specified in Tune-Up Data. Feeler gauge must be flat and clean
- Tighten point support lock screw and recheck point gap.



Setting point gap by shifting point bracket

Special Note: Car manufacturers are showing increased preference for point setting by dwell meter, rather than by use of a feeler gauge. This is due to distributor design, to irregularities on contact surfaces of used points that prevent accurate readings, and to problems caused by dirt or oil carried into the ignition by a feeler gauge.

The latter trouble is most evident in transistorized ignitions, which have a low primary current flow. Resistance introduced by oil film or dirt particles can easily upset this current flow.

Battery Charge:

If the specific gravity test indicates the need for charging, proceed as follows:

- Add water to bring electrolyte to proper level.
- Charge battery in accordance with instructions furnished with charger.
- Continually check battery for signs of dangerous overheating if fast charger is used; slow-charge if possible.

A fast battery charger is an essential piece of equipment

CAUTION:

- Do not smoke, and avoid creating sparks, near a battery that is being charged.
- When recharging battery in an alternator-equipped car, always disconnect battery cables from terminals before operating charger.
- Never use fast battery charger as a booster to start alternator-equipped engines.

(Failure to observe these last two precautions could result in damage to alternator diode rectifiers.)

COMPRESSION TEST

Cylinder compression is tested next because an engine with mechanical defects cannot be properly tuned.

This test reveals the presence of excessive carbon accumulation of such internal engine defects as sticking or leaking valves, worn or broken piston rings, worn cylinders, cracked or burned pistons or leaking head gaskets. These conditions must be corrected before Tune-Up can be effective. A compression test must include all cylinders.

Important: Compression readings for individual cylinders are given as figures in the Data for each car. There may be a figure range ("130-170 psi"), or there may be a minimum allowable pressure given ("Minimum . . . . . 145 psi").

Most car makers also state the maximum allowable pressure variation between cylinders as a figure ("20 psi"). *But a few manufacturers prefer to use percentages* (Buick: "Lowest reading cylinder must be more than 75% of the highest reading cylinder."). In the case of Buick, then, you would simply multiply it by .75. If compression pressure of the lowest reading cylinder is *above* the figure arrived at, then compression pressure for all cylinders meets the car maker's requirements.

The compression test reveals internal engine conditions

Compression test readings generally indicate these engine conditions:

TEST INDICATIONS	ENGINE CONDITION
Readings lower than specified.	Worn piston rings, cylinder walls, and/or leaking valves.
Readings higher than specified.	Excessive carbon accumulation.
Low readings in adjacent cylinders.	Defective cylinder head gasket.
Low reading in one cylinder.	Broken piston rings or valves not fully seated.
No reading in any cylinder.	Broken piston or valves sticking open.

For detailed analysis of compression readings refer to the instrument manufacturer's instruction sheet.

Engine must be at operating temperature before a compression test is made.

Conduct the test as follows:

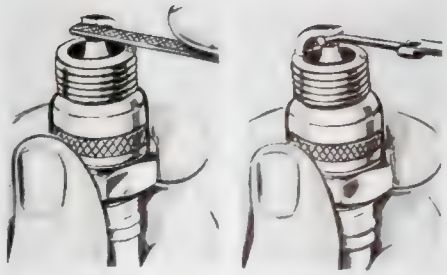
1. Air blast dirt from around spark plugs.
2. Disconnect spark plug cables by gently twisting the rubber boot and lifting cable terminal straight from plug.
3. Remove all spark plugs.
4. Block linkage to hold throttle and choke open.
5. Place compression tester in No. 1 spark plug hole and crank engine about four compression strokes.
6. Observe and record highest pressure reading.
7. Test other cylinders and record highest readings.
8. Readings should agree with limits specified in Tune-Up Data.

SPARK PLUGS

Spark plugs should be serviced periodically to regap electrodes and to remove fouling carbon, lead and oil accumulations from insulator and electrodes. Replace plugs used for over 10,000 miles.

Service:

1. Remove oil from threads and insulators. Use kerosine or solvent, dry with air blast before sandblasting.



Careful filing and gapping of spark plug electrodes are critical spark plug service operations

2. Sandblast in spark plug cleaner. Be sure all abrasive is out of plug
3. Clean threads with wire brush.
4. Bend side electrode slightly to open gap. File electrodes to get clean, flat, parallel surfaces between center and ground electrode

Proper torquing of spark plugs is vital to efficient plug operation

5. Check electrode gap with feeler gauge and reset to specified gap listed in Tune-Up Data. Bend only the side electrode.
6. Position new gasket on spark plug and turn plug into cylinder head with the fingers. Apply lubricant to plug threads for aluminum head engines as indicated in Data.
7. Torque to specifications listed in Data.

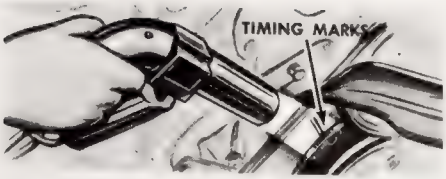
CAUTION:
Always use spark plug number listed in the Data to insure selection of proper replacement plugs.

IGNITION CABLES

Inspection of ignition cables is an important part of complete Tune-Up. These cables must efficiently conduct high-voltage current from the coil to the distributor cap's center tower, and from terminals in the cap to the spark plug.

Follow these steps to insure good cable performance:

- Visually inspect cable insulation and terminals.
- Use an ohmmeter to test carbon-impregnated, core-type cables to see that their resistance value has not increased over that specified by manufacturer. (High resistance may signal a loose or disconnected terminal, or a break in the core.)



An ignition timing light

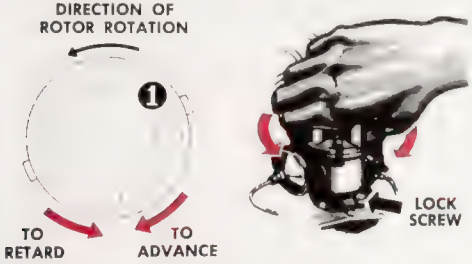
4. Connect timing light to spark plug in No. 1 cylinder or to No. 1 cylinder distributor cap tower. Follow the light manufacturer's instructions.
5. Start engine. Timing light will flash each time No. 1 cylinder fires.
6. Since most engines are ignition-timed at idle speed, the engine must be at operating temperature for best results.
7. Aim light at timing mark. Reset ignition timing if mark appears on either side of reference pointer.

CAUTION: Be careful of revolving fan blades.

To reset ignition timing . . .

Ignition timing is set by loosening the distributor clamp screw and slowly turning the distributor housing *against* rotor rotation to *advance* timing or *with* rotor rotation to *retard* timing, until the correct timing mark aligns with the reference pointer. Then tighten clamp screw and recheck timing.

Engines with an ignition timing setting other than that specified in the Data will not provide good performance, will waste fuel, and will tend to overheat. (Advanced timing, for example, causes spark knock and high combustion-chamber temperatures that damage plugs and pistons.)



Ignition timing is set by turning the distributor housing in the direction of the bold arrows

Rotate housing correctly:

Slowly turn the distributor housing in the direction indicated by arrows to align specified timing marks.

If ignition timing does not meet specifications, the condition has very likely been caused by wear on the rubbing block of the breaker point arm. Before resetting timing, inspect the condition of points and rubbing block. Replace defective points. If points pass inspection, adjust dwell angle and lubricate the distributor cam. Then reset ignition timing as required. Readjusting dwell angle may automatically reset timing.

Direction of rotor rotation may be determined without removing the distributor cap or cranking the engine by observing the position of the vacuum advance unit on the distributor housing.

Position of vacuum advance unit can indicate direction of rotor rotation

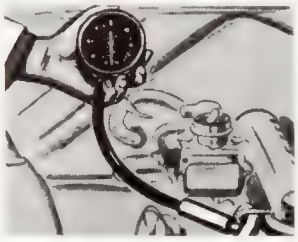
Function of the vacuum unit is to advance spark timing by moving the breaker plate *against* the direction of rotor rotation. Rotor rotation will therefore be *away* from the vacuum unit as indicated by the arrow in the illustration.

FUEL PUMP

Fuel pump tests check ability of the pump to maintain the specified pressure and to supply the proper fuel volume to meet engine fuel requirements at all speeds and loads. Observe all safety fire rules when conducting the following general fuel pump test procedures.

Pressure Test:

- Disconnect fuel line at carburetor.
- Attach pressure gauge to disconnected fuel line.
- Idle engine at speed specified in Data.
- Note pressure reading on gauge; maintain pressure and watch gauge for signs of pressure drop.
- Replace fuel pump if pressure is out of limits.



A fuel pump pressure test

Volume Test: (for mechanical pumps)

- Insert tee in fuel line at carburetor.
- Attach length of tubing to tee.
- Start engine and run at recommended speed.
- Direct gasoline flowing from free end of tube into pint measure held level with carburetor.

A fuel pump volume test

- Observe time required to collect quantity of fuel specified. Replace fuel pump that delivers less than specified volume in time listed in Data.

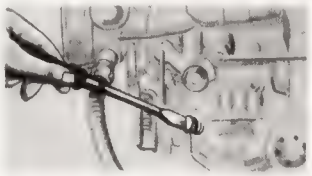
CARBURETOR ADJUSTMENT

Carburetor adjustment takes place only when all other conditions pertaining to efficient engine performance have been checked, as previously described. An initial setting of the idle mixture screws should be made first. Then make the final adjustment.

When seating idle mixture screws, stop turning screws inward as soon as the needle touches its seat. Forcibly seating mixture screws results in grooving the tapered needle tip and in damaging the needle seat, making fine idle adjustment impossible.

Initial Setting:

1. With engine stopped, turn adjusting screw(s) in (clockwise) until seated *lightly*.



Adjusting the carburetor idle mixture

2. Turn adjusting screw(s) out (counterclockwise) the number of turns specified in Tune-Up Data. When carburetor has two screws, give each the same number of turns.

Final Adjustment:

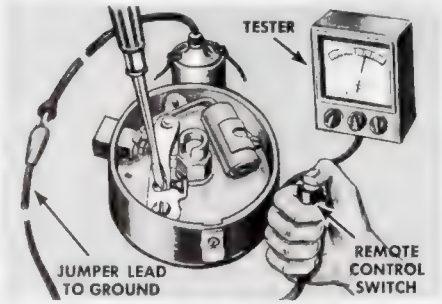
3. Connect tachometer to distributor or coil distributor primary terminal, and to ground.
4. Start and operate engine until normal operating temperature is reached.
5. Adjust throttle stop screw for correct idle speed specified in Tune-Up Data.
6. Turn idle adjusting screws in equally until tachometer needle drops back slightly.
7. Turn idle adjusting screws out until tachometer returns to highest reading.
8. Adjust throttle stop screw for idle speed specified in Data.

Automatic Choke Adjustment:

Insufficient automatic choke action causes hard starting and continual stalling with a cold engine. Prolonged choke action causes excessive fuel consumption, fouled spark plugs, and crankcase motor oil dilution.

To set dwell angle with a dwell meter and remote control switch, proceed as follows:

- Connect dwell meter to distributor or coil distributor primary terminal, and to ground.
- Connect remote control switch.



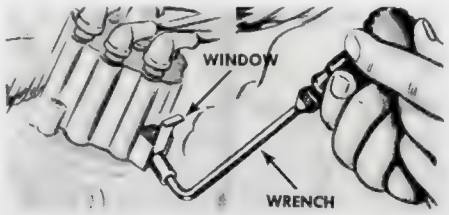
Using dwell meter and remote control switch to set point dwell angle

- Pull coil lead from distributor cap and ground lead with jumper.
- Lift cap from distributor and remove rotor.
- Turn *On* ignition switch.
- Crank engine and turn point adjusting screw, or shift point bracket, to obtain dwell setting specified in Data.
- Tighten point lock screw, remove jumper lead, press coil lead into distributor cap tower.

7. Apply a thin film of cam lubricant to breaker cam.
8. Clean points with lintless tape and solvent.
9. Install new distributor rotor and cap. Press the cables securely into cap towers. Seat rubber boots over spark plugs.

To adjust dwell angle on Delco external-adjusting type distributors, proceed as follows:

- Connect dwell meter to coil distributor primary terminal and to ground.
- Start and idle engine.
- Lift window, insert "hex" wrench in adjusting screw, turn screw to obtain dwell angle setting specified in Data.



Adjusting a Delco external-adjusting type distributor with the engine running

- Completely close window.
- Check ignition timing, reset as required.

Ignition Point Service Precautions:

Always use a dwell meter rather than a feeler gauge to readjust used breaker points. A feeler gauge cannot measure true clearance between pitted points.

To avoid damage to transistorized ignition systems, follow dwell meter manufacturer's instructions.

Never realign used breaker points; replace them.

Do not clean used points with tape and solvent. Small pieces of lint torn from the cloth by pits on the points will prevent proper point contact and interfere with operation of the ignition system.

Always check the ignition timing after breaker point adjustment and reset it as required.

CONDENSER

The potential life of ignition points is dependent upon the condenser. Sparking across ignition points is largely controlled by condenser capacity.

Always replace the condenser when replacing ignition points. Recommended replacement condenser, and its capacity, are shown in the Tune-Up Data.

CYLINDER NUMBERING SEQUENCE

Cylinder numbering sequence is illustrated in the Data because it varies with the engine designer. The cylinder used to ignition time the engine, usually No. 1, and its corresponding distributor cap tower, are identified in black on the engine illustration. Either of these points can be used for connecting the timing light when setting engine ignition timing. The distributor cap hold-down clip or screw positions are also indicated to accurately identify No. 1 cap tower position.

Examples of No. 1 cylinder position and cylinder numbering sequences

Direction of rotor rotation, as viewed from the top of the distributor, is indicated by an arrow on every distributor illustration.

Firing order of an engine is the sequence in which cylinders must be fired for smooth operation and full power. Firing order of the engine(s) is listed below every engine diagram(s) in the Data.

Knowing the position of the No. 1 tower in the distributor cap, the direction of rotor rotation and the firing order, will serve two important functions.

First: Cables can be properly connected to their respective spark plugs after plugs have been serviced or replaced.

Second: When replacing defective spark plug cables with a new set, the new cables can be correctly positioned in the distributor cap by starting with No. 1 position. Follow the firing order around the cap *in the direction of rotor rotation* while selecting each cable for proper length.

When replacing cables, be sure to press the new cables firmly into the distributor cap towers, and to properly position cables in their holders, when used to prevent ignition cross-firing.

IGNITION TIMING

Correct ignition timing is one of the most important factors bearing on efficient and economical engine operation. It must be checked on every Tune-Up.

In most instances, ignition timing is checked with a timing light powered by battery current and "triggered" by voltage applied to the spark plug to which the light is connected—usually the one in No. 1 cylinder. If this spark plug is inaccessible, a timing light adapter can be inserted between the No. 1 distributor cap tower and its spark plug cable. The light can then be connected to the adapter.

Using No. 1 distributor cap tower for a timing light connection with the aid of an adapter

It is important that an adapter be used when necessary. DO NOT puncture spark plug cables with pins or clips to make a connection. Piercing the insulation results in permanent cable damage, loss of high-voltage current, and ignition misfiring.

Timing setting and location of timing mark are shown in the Tune-Up Data. Always refer to this Data for ignition timing procedures and specifications because they vary with different car manufacturers. Check the ignition point dwell or gap before setting ignition timing because any subsequent change in point dwell will change the timing.

Ignition timing procedures, in general, are:

1. Locate timing mark on harmonic balancer, crankshaft pulley or flywheel.
2. Bump engine with starter until timing mark appears. If marks are not readily visible, coat timing mark and reference pointer on engine with white chalk or paint.
3. Operate engine until normal operating temperature is reached. Stop engine.

BUICK LeSABRE, INVICTA, ELECTRA—1961-'62

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- Conoco Super Lube M
- (90) Conoco Universal Gear Lubricant SAE No. 90
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

POWER STEERING RESERVOIR (TA)
Check level. Maintain to level mark

CRANKCASE (4 qts.)
Drain and refill: Winter—30 days
Summer—60 days
Do not exceed 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap elements in kerosene, dry and recoil with crankcase grade

STEERING GEAR (90)
Remove plug and fill

Not on Power Steering

TURBINE
'61 (12 qts.) '62 (2½ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 25,000 miles. See General Instructions

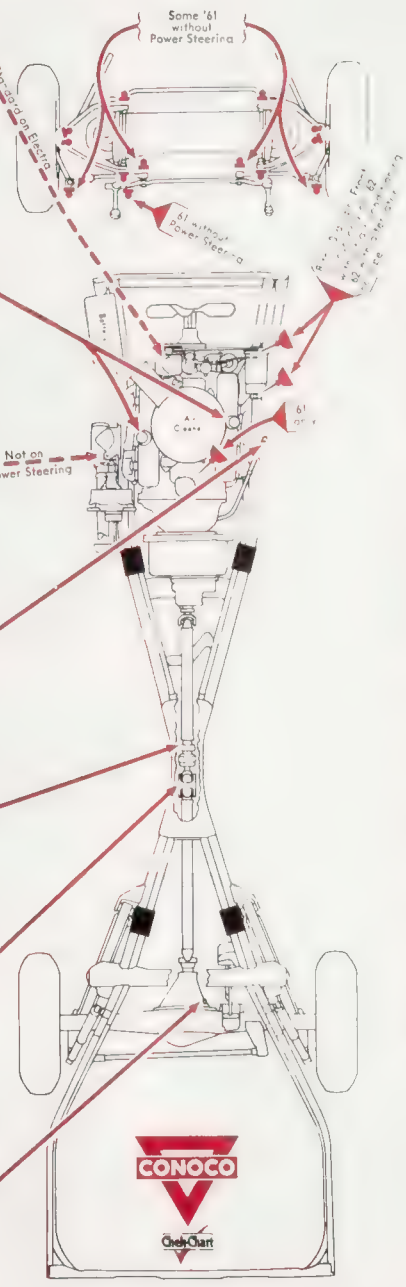
PROPELLER SHAFT SPLINE
Every 10,000 miles. Rotate shaft until plug aligns with hole in frame. Remove plug. Special adapter required

CONSTANT VELOCITY JOINT
Every 5000 miles. Rotate shaft until depressed type fitting aligns with hole in frame. Special adapter required

REAR AXLE (4½ pts.)
(Also includes Positive Traction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80



COOLING SYSTEM: 17 qts. (with heater 18½ qts.)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 5000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 5000 miles.

FUEL FILTER
Replace fuel filter element every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Sealed type bearings.

GAS TANK: 20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	60	70

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
Lowest reading cylinder must be more than 75% of the highest reading cylinder

SPARK PLUGS
AC: 44S; high-speed operation, 42; low speed, 45S
Gap: .035"
Torque: 25-30 ft. lb.

IGNITION POINTS
Delco
Gap: .016"
Dwell angle: 29°-31° (30° preferred)

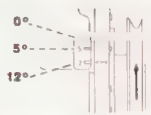
CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 2, 7, 8, 4, 5, 6, 3

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Disconnect vacuum hose and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug or distributor cap tower
5. Set engine speed to idle rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum hose and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 12°

FUEL PUMP
AC model HE
Pressure: 4¾-6½ lb. at idle rpm
Volume: Not required

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Auto. Trans.
CARTER		
4-bbl. AFB	¾	index
ROCHESTER		
2-bbl. 2GC	1½	1 rich*
4-bbl. 4GC	1½	index
STROMBERG		
2-bbl. WW-2	1½	index

* 1962, index

ENGINE IDLE SPEED
Manual Trans. 525 rpm*
Auto. Trans. 525 rpm in NEUTRAL or PARK*
Air Cond. 575 rpm in NEUTRAL with unit turned OFF.*
* Make certain idle compensator valve is closed, if so equipped

VALVE CLEARANCES
Hydraulic lifters

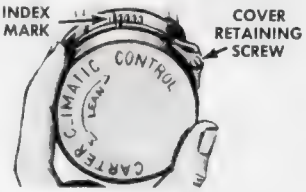
BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed to within 2" (3" for high-speed driving) of floorboard with standard brakes or within 1" (1¼" for high-speed driving) of floorboard with power brakes, engine running, the need for service is indicated

Adjust the brakes as follows:
1. Using suitable tool, turn star wheel adjuster to expand shoes until wheel can just be turned by hand. Drag should be equal at all wheels
2. Back off adjuster 15 notches (1 or 2 additional notches if drag persists)
3. Repeat procedure at each wheel

Bleeding sequence: LF, RF, LR, RR

An index mark (line) on choke body or carburetor air horn is used to set tension of the heat-sensitive choke spring. Automatic choke covers usually have mark to indicate direction in which to turn.



Turning the choke cover sets the automatic choke adjustment

Chokes of this type are adjusted as follows:

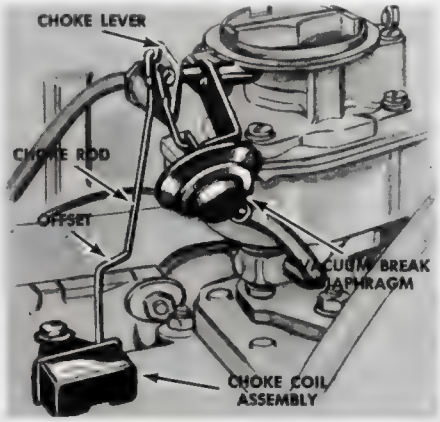
- Loosen cover retaining screws.
- Adjust cover to position specified in the Data.
- Tighten retaining screws.

Another type of automatic choke uses a temperature-sensing coil (on exhaust manifold of 6-cyl. engines; over exhaust crossover passage in intake manifold on V-8s). Connecting coil to choke lever is a rod. After the engine starts, a vacuum-operated break partially opens the choke. As the coil becomes hotter, the choke rod opens the choke plate.

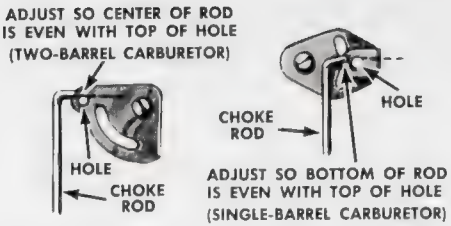
Adjust choke by bending choke rod in the offset area to adjust its length. Follow these steps:

- Remove carburetor air cleaner.
- Disconnect choke rod from choke lever.
- Lift rod against housing stop; hold valve closed
- Align proper part of rod with tops of hole in choke lever (bottom of rod on 1-bbl. carburetors; center of rod on 2-bbl. carburetors).
- Bend rod at offset to get proper alignment.
- Move rod up and down to check free operation at manifold end. (If rod was shortened for lean adjustment, see that choke valve closes fully with rod pulled up against stop.)

Replace a defective choke coil by removing choke cover and coil bracket screw. Make sure stop tab of new unit is *inboard*, and choke-rod eye of the coil is below the tab. Then adjust rod length.



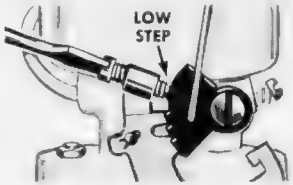
Coil-operated automatic choke



Choke rod alignment with rod pulled up and choke plate held closed

ENGINE IDLE SPEED

Correct engine idle speed is important: an idle speed set too low causes frequent engine stalling; set too high, it interferes with proper clutch engagement. In automatic transmission-equipped cars an idle speed set too high causes the car to "creep", requiring constant brake application at traffic lights.



Setting engine idle speed

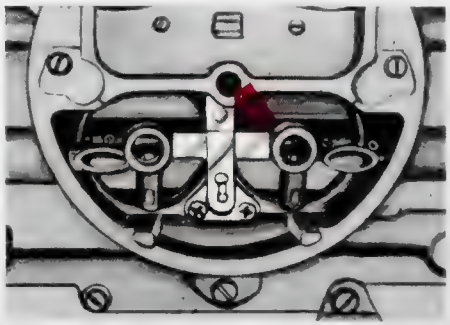
Idle speed adjustment is made with engine at operating temperature and throttle stop screw resting on the low step of the fast idle cam. Recommended idle speed is specified in the Data.

CARBURETOR HOT IDLE COMPENSATOR

This valve admits air into the intake manifold as needed to offset the fuel-enriching effects of excessive fuel vapors during hot engine operation.

Rough engine idle and stalling signal malfunction of this heat-sensitive valve. It is not repairable and should be replaced.

As noted in Tune-Up Data for cars with engines fitted with this valve, *do not attempt to set engine idle speed unless valve is held closed.* (High underhood temperatures may open valve. Idle-speed adjustment with valve open will be upset when engine returns to normal operating temperature.)



Position of compensator valve in Carter AFB four-barrel carburetor

ANTI-STALL DASHPOT

A dashpot (throttle slow-closing device) is used on many cars. It prevents engine stalling when the throttle is closed suddenly.

If, after idle speed adjustment, an engine does not return to the same idle speed each time it is accelerated and idled, throttle linkage may be binding or the dashpot may be malfunctioning. Relieve linkage binding and replace dashpot if adjustment fails.

VALVE CLEARANCE

Valves that require adjustment are generally adjusted with the engine hot and running. If, because of engine design or other factors, it is recommended that the valves be adjusted when the engine is cold and not running, the Tune-Up Data will so indicate

The general valve clearance adjustment procedure is as follows:

1. Remove rocker arm or valve chamber cover.
2. Start and idle engine till normal operating temperature is reached.

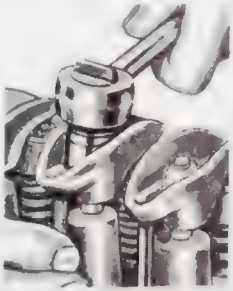
Adjusting engine valve clearance

3. Pass feeler gauge between rocker arm and valve stem tip on all valves.
4. Adjust valves to clearance specified in Data
5. Stop engine.
6. Replace cover. Be sure cover gasket is in perfect condition. If it is not, replace it.

HYDRAULIC VALVE LIFTERS

Most car engines have hydraulic valve lifters which automatically maintain zero lash (no clearance). Adjustment is needed only if lifter noise indicates trouble, or if lifters are removed for cleaning, or if they are replaced

Here is the usual adjustment procedure:



1. Bring No. 1 cylinder to top dead center compression position.
2. Back-off adjusting nut on exhaust valve until push rod can be turned with finger tips.
3. While turning push rod, tighten adjusting nut to remove all lash — then tighten adjusting nut an *additional* full turn, or as otherwise specified. (Extra turn positions hydraulic lifter at center of its travel in lifter body.)
4. Adjust intake valve in No. 1 cylinder in same way, then adjust other valves in engine.

BUICK

INVICTA—1963; LeSABRE, WILDCAT, ELECTRA—1963-'64; RIVIERA—1963-'65

KEY

- Conoco Super Lube
- Conoco Super Lube M
- 90 Conoco Universal Gear Lubricant SAE No. 90
- TA Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Front suspension lubricate every 6000 miles or 6 months. '63 steering linkage: If squeaks develop, remove plugs, install fittings and lubricate every 6000 miles or 6 months. CAUTION: Apply sparingly. See General Instructions

POWER STEERING RESERVOIR (TA)

Every 6000 miles. Check level. Maintain to level mark

CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR

Every 24,000 miles
Some models
Remove cap screw and check level
Others
Remove plug and fill

TRANSMISSION

3-Speed 300 cu. in. engine (2 pts.)
Others (3½ pts.) 4-Speed (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

'63 TURBINE (2½ qts.)
'64-'65 SUPER TURBINE (2½ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

PROPELLER SHAFT SPLINE

Every 12,000 miles. Rotate shaft until plug aligns with hole in frame. Remove and replace plug. Special adapter required

CONSTANT VELOCITY JOINT

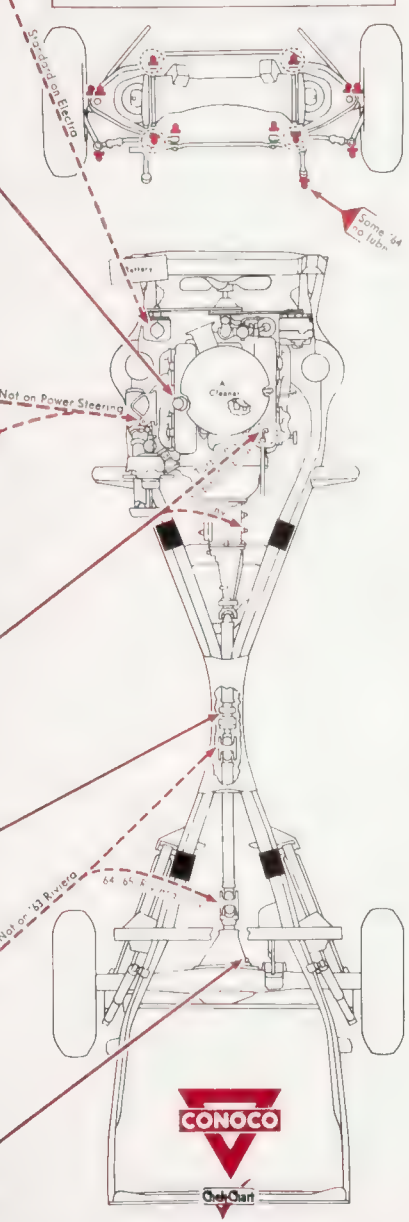
Every 6000 miles. Rotate shaft until depressed-type fitting aligns with hole in frame. Special adapter required

REAR AXLE (4½ pts.)

(Also includes Positive Traction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80



COOLING SYSTEM: LeSabre except Estate Wagon **12¾ qts.** With air conditioning **15 qts.** Others **17 qts.** With air conditioning **19¾ qts.** (with heater add **1 qt.-1½ qts.**)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE
Install new valve every 6000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER
(1964-'65 ex. early 1964 LeSabre with Super Turbine 300 trans.) Replace filter every 24,000 miles, severe service 12,000 miles.

ELECTRO-CRUISE POWER UNIT AIR FILTER
Clean air filter every 6000 miles.

CHOKE HOUSING VENT
Clean vent filter every 12,000 miles.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

GAS TANK: 20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All except 1964 LeSabre 300 eng.	27	70
1964 LeSabre 300 eng.	24	61

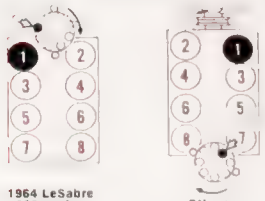
COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
Lowest reading cylinder must be more than 75% of the highest reading cylinder

SPARK PLUGS
AC 44S except 1964 LeSabre 300 eng., 44FFS
All except 1964 LeSabre 300 eng., for high-speed driving or hauling trailers, 42 Commercial
Gap: .035"
Torque: 30 ft. lb

IGNITION POINTS
Delco Gap: .016"
Dwell angle: 29 -31° (30 preferred)

CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence



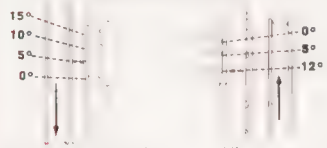
1964 LeSabre 300 engine — Others

Firing Order:
1964 LeSabre 300 eng. 1, 8, 4, 3, 6, 5, 7, 2
Others 1, 2, 7, 8, 4, 5, 6, 3

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug or distributor cap tower
5. Set engine to idle speed
6. Observe timing at crankshaft damper, turn distributor to obtain specified setting
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



1964 LeSabre 300 engine — Others

Timing Setting (Before Top Dead Center)
1963 Man. Trans. 5°; Auto. Trans. 12°; at idle
1964 300 eng. at 550 rpm, 2°
1964-65 401, 425 engs. at 500 rpm, 2°
425 eng. with dual 4-bbl. and Auto Trans., at 500 rpm, 12°

FUEL PUMP
AC model HE except 1964 LeSabre 300 eng., model JU
Pressure: 5 lb. minimum at idle rpm except 1964 LeSabre 300 eng., 3¾ lb. minimum at idle rpm; at carburetor height
Volume: Not required

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. AFB 300 eng.	1	index	1 rich
401, 425 engs.	¾	index	index
2/4-bbl. AFB 425 eng.	1†	index	index
ROCHESTER			
2-bbl. 2GC	1½	index	index*
4-bbl. 4GC	1½	index	index**

†1963, 2 turns *1964, 2 rich **1964 LeSabre 300 eng., 2 rich

ENGINE IDLE SPEED
1963 500 rpm* (in DRIVE)
Air Cond. 550 rpm* (in DRIVE), unit OFF
1964 300 eng., 550 rpm* (in DRIVE)
Air Cond. 600 rpm* (in DRIVE), unit OFF
1964-65 401, 425 engs. 500 rpm* (in DRIVE)
Air Cond. 550 rpm* (in DRIVE), unit OFF
* Idle compensator valve closed, if so equipped

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, make initial adjustment as follows:

1. Hold self-adjusting actuator off adjusting screw and turn adjusting screw until wheel can just be turned by hand. Drag should be equal at all wheels.
2. Back off adjusting screw 30 notches (1 or 2 additional notches if drag persists)
3. Repeat procedure at each wheel

Bleeding sequence: LF, RF, LR, RR

BUICK SPECIAL—1961-'62

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	42

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
Lowest reading cylinder must be more than 75% of the highest reading cylinder

SPARK PLUGS
AC. V-6 44S; V-8: 2-bbl. carb., 45FFS; 4-bbl. carb., Skylark, 44FFS
Gap: .035"
Torque: V-6 25 ft. lb.; V-8 15-20 ft. lb.*
* Use motor oil on threads

IGNITION POINTS
Delco
Gap: .016"
Dwell angle: 29 -31 (30 preferred)

CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order:
V-6 1, 6, 5, 4, 3, 2
V-8 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug or distributor cap tower
5. Set engine speed to idle rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center): 5

FUEL PUMP
AC model HQ
Pressure: 4-5¼ lb. at idle rpm
Volume: Not required

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
2 bbl. 2GC	1½*	index	index
4-bbl 4GC	1½	index	index

* 1962: V-6 and V-8, 1 turn

ENGINE IDLE SPEED
Manual Trans. 525 rpm
Auto. Trans. 525 rpm in NEUTRAL
Air Cond. 575 rpm in NEUTRAL w/unit turned OFF
Make certain idle compensator valve is closed, if so equipped

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed to within 2" (3" for high-speed driving) of floorboard with standard brakes or within 1" (1½" for high-speed driving) of floorboard with power brakes, engine running, the need for service is indicated

Adjust the brakes as follows:

1. Using suitable tool, turn star wheel adjuster to expand shoes until wheel can just be turned by hand. Drag should be equal at all wheels
2. Back off adjuster 15 notches (1 or 2 additional notches if drag persists)
3. Repeat procedure at each wheel

Bleeding sequence: LF, RF, LR, RR

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- Conoco Super Lube M
- (90) Conoco Universal Gear Lubricant SAE No. 90
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

POWER STEERING RESERVOIR (TA)
Check fluid level with dipstick. Maintain level to FULL mark

CRANKCASE (4 qts.)
Drain and refill: Winter—30 days
Summer—60 days
Do not exceed 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

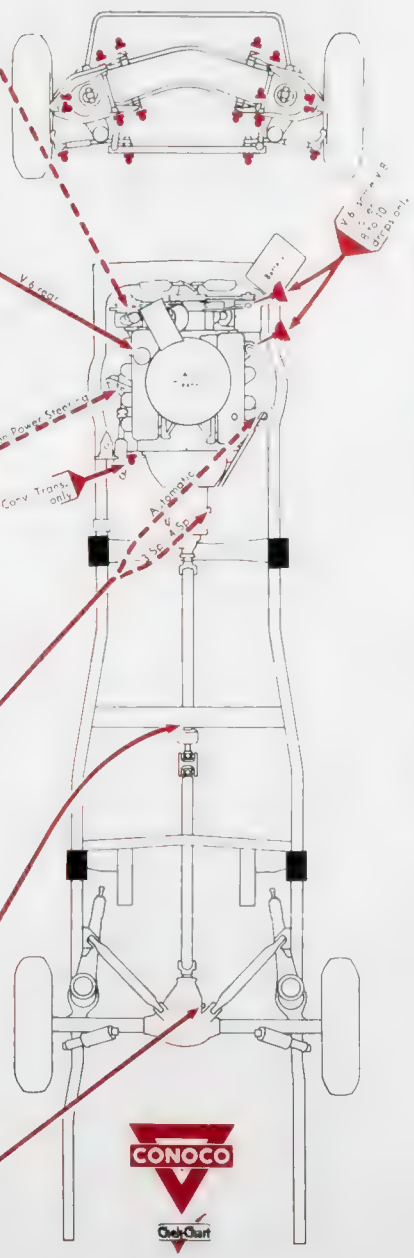
STEERING GEAR (90)
Remove plug and fill

TRANSMISSION
3-Speed (2¼ pts.) 4-Speed (2½ pts.)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90

AUTOMATIC TRANSMISSION
Total Capacity 6 qts.
Refill Capacity 2 qts.
Conoco Automatic Transmission Fluid Type A
Drain and refill: Every 25,000 miles. See General Instructions

PROPELLER SHAFT SPLINE
Every 10,000 miles. Remove plug. Special adapter required

REAR AXLE (2 pts.)
(Also includes Positive Traction axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 80



COOLING SYSTEM: V-8 12 qts., V-6 10½ qts. (with heater add 1½ qts.)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 5000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 5000 miles

FUEL FILTER
V-6 replace fuel filter element [illegible] tioned models and clean element [illegible] tor inlet on all other models every 12,000 miles. V-8, replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Sealed type bearings.

GAS TANK: 16 gals.

BUICK SPECIAL—1964-'66

KEY

- Conoco Super Lube
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months

STEERING GEAR
Every 24,000 miles. Remove cap screw and check level

POWER STEERING RESERVOIR (TA)
Every 6000 miles. Check level. Maintain to level mark

CRANKCASE (4 qts.)
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions
Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

CLUTCH EQUALIZER SHAFT
If stiffness occurs, remove plug, install fitting or use rubber tipped adapter to lubricate

TRANSMISSION LINKAGE EQUALIZER
Every 6000 miles or 6 months. Lubricate thru hole in bottom of equalizer with rubber-tipped or tapered adapter

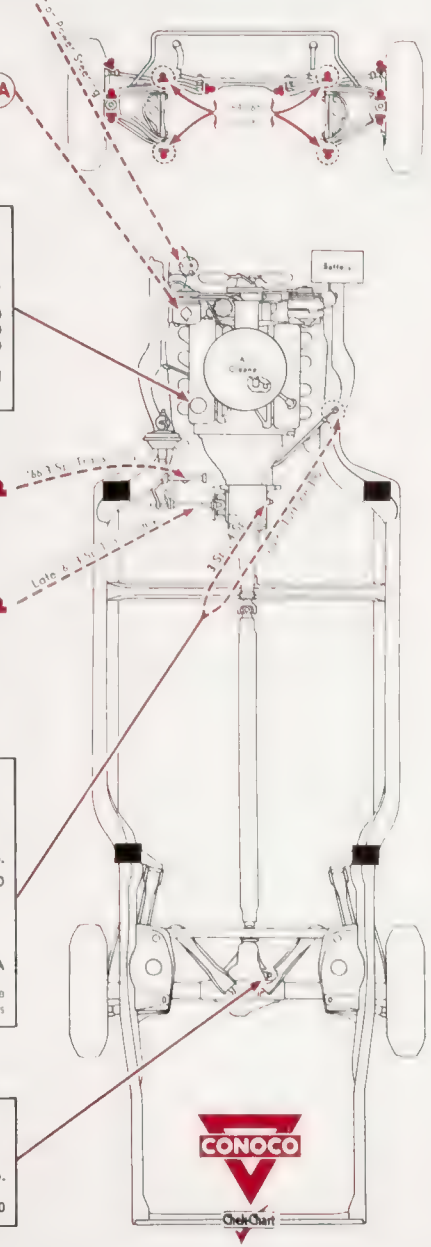
TRANSMISSION
'64 '65 3-Speed ex. Gran Sport (2 pts.)
'65 Gran Sport, all '66 3-Speed (3½ pts.)
'64-'65, '66 V-8 4-Speed (2½ pts.)
Conoco Universal Gear Lubricant SAE No.

All temperatures	90

SUPER TURBINE 300
(Approx. 2½ qts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

REAR AXLE (2½ pts.)
(Also includes Positive Traction axle)
Conoco Universal Gear Lubricant SAE No.

All temperatures	80



COOLING SYSTEM: V-6, 10 qts.-11¼ qts. V-8, 12¼ qts.-18½ qts.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE
Install new valve every 6000 miles.

FUEL FILTER
V-6, clean fuel filter every 12,000 miles. V 8, replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER
(Late 1964, early 1965 V-8) Replace filter every 24 000 miles, severe service 12,000 miles

CHOKE HOUSING VENT
(1964 V-8) Clean vent filter every 12,000 miles

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency.

GAS TANK: 20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1966 V-6	22F	44
Other V-6, V-8 300-, 340-cu. in. engines	24	61
400-cu. in. engine		
1965 V-8 Gran Sport	27	70
1966 V-8 Gran Sport	24T	70

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
Lowest reading cylinder must be more than 75% of the highest reading cylinder

SPARK PLUGS
1964 V-8: AC 44FFS; high-speed driving or hauling trailers, 42FF
1965-66 V-8 and all V-6: AC 44S; high-speed driving or hauling trailers, 42 Commercial
Gap: .035"
Torque: 1964 V-8: 20 ft. lb.*; All others, 30 ft. lb.
* Use motor oil on threads

IGNITION POINTS
Delco
Gap: .016"
Dwell angle: 29°-31° (30° preferred)

CONDENSER
Delco
Capacity: .18-.23 mfd

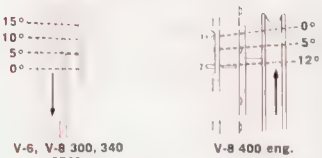
Cylinder Numbering Sequence

V-6 | V-8 300, 340 engs. | V-8 400 eng.

Firing Order: V-6, 1, 6, 5, 4, 3, 2
V 8, 300-, 340-cu. in. engs. 1, 8, 4, 3, 6, 5, 7, 2
V-8, 400-cu. in. eng. 1, 2, 7, 8, 4, 5, 6, 3

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug or distributor cap tower
5. Set engine speed to idle rpm
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



V-6, V-8 300, 340 engs. | V-8 400 eng.

Timing Setting (Before Top Dead Center):
V-6, 5°; V-8, 2°

FUEL PUMP
AC: All V-6 and V-8 300, 340 engs., 1964-65, model JU; 1966, Part No. 6440156. 400 eng., 1964-65, model HE; 1966, Part No. 6440033
Pressure: All V-6 and V-8 300, 340 engs., 3¾ lb. minimum; 400 eng., 5 lb. minimum; at idle rpm
Volume: Not required

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. AFB			
300, 340 engs.	1	index	1 rich
400 eng.	¾	index	index
ROCHESTER			
2-bbl. 2GC	1½**	index	2 rich*
4-bbl. 4GC	1½	index	2 rich†

*All V-6 and V-8 1965-66 index, †1966 index
**V-6, 2

ENGINE IDLE SPEED
Manual Trans.: All V-6 and V-8 300, 340 engs. 550 rpm*; 400 eng. 500 rpm*
Auto. Trans.: All V-6 and V-8 300, 340 engs. 550 rpm*; 400 eng. 500 rpm*; in DRIVE
Air Cond.: 300, 340 engs. 600 rpm*; 400 eng. 550 rpm*; in DRIVE with unit turned OFF
* Make certain idle compensator valve is closed, if so equipped

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LF, RF, LR, RR

BUICK SPECIAL—1963

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
V-6	22F	44
V-8	24	61

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
Lowest reading cylinder must be more than 75% of the highest reading cylinder

SPARK PLUGS
AC: V-6, 44S; V-8 2-bbl. carb., 45FFS; 4-bbl. carb., Skylark, 44FFS
Gap: .035"
Torque: V-6 30 ft. lb.; V-8 20 ft. lb.*
* Use motor oil on threads

IGNITION POINTS
Delco
Gap: .016"
Dwell angle: 29°-31° (30° preferred)

CONDENSER
Delco
Capacity: .18-.23 mfd

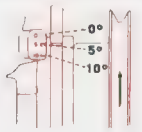
Cylinder Numbering Sequence

Firing Order:
V-6 1, 6, 5, 4, 3, 2
V-8 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug or distributor cap tower
5. Set engine speed to idle rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 5°

FUEL PUMP
AC model HQ
Pressure: 4-5¼ lb. at idle rpm
Volume: Not required

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
2-bbl. 2GC	1	index	index*
4-bbl. 4GC	1½	index	index

* V-6, 1 rich

ENGINE IDLE SPEED
Manual Trans.: 500 rpm
Auto. Trans.: 500 rpm; in DRIVE
Air Cond.: 550 rpm in DRIVE, with unit turned OFF
Make certain idle compensator valve is closed, if so equipped

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, make initial adjustment as follows:

1. Hold self-adjusting actuator off adjusting screw and turn adjusting screw until wheel can just be turned by hand. Drag should be equal at all wheels
2. Back off adjusting screw 30 notches (1 or 2 additional notches if drag persists)
3. Repeat procedure at each wheel

Bleeding sequence: LF, RF, LR, RR

KEY

- Conoco Super Lube
- Conoco Super Lube M
- (90) Conoco Universal Gear Lubricant SAE No. 90
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Front suspension lubricate every 6000 miles or 6 months. Steering linkage: If squeaks develop, remove plugs, install fittings and lubricate every 6000 miles or 6 months. **CAUTION:** Apply sparingly. See General Instructions

POWER STEERING RESERVOIR (TA)
Every 6000 miles. Check fluid level with dipstick. Maintain level to FULL mark

STEERING GEAR (90)
Every 6000 miles. Remove plug and fill

CRANKCASE (4 qts.)
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and reoil with crankcase grade

TRANSMISSION

3-Speed (2¼ pts.) 4-Speed (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

AUTOMATIC TRANSMISSION

Total Capacity 6 qts.
Refill Capacity 2 qts.

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles. See General Instructions

PROPELLER SHAFT SPLINE
Every 12,000 miles. Remove plug. Special adapter required

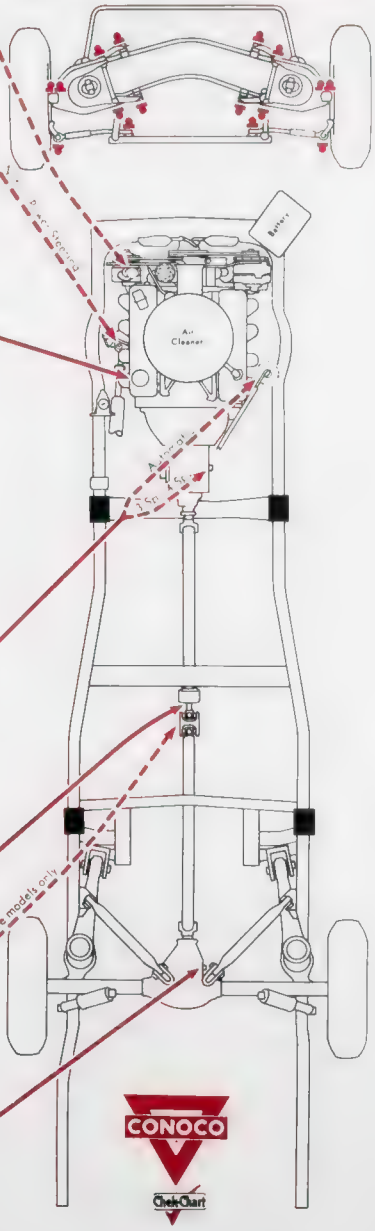
CONSTANT VELOCITY JOINT
Every 6000 miles. Depressed-type fitting Special adapter required

REAR AXLE (2 pts.)

(Also includes Positive Traction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80



COOLING SYSTEM: V-8 12 qts., V-6 10½ qts. (with heater add 1½ qts.)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL SEASON Super MOTOR OIL SAE No. 10W 30, remove excess oil and reinstall

CRANKCASE VENTILATOR VALVE
Install new valve every 6000 miles

FUEL FILTER
V-6, standard V-8 clean fuel filter every 12,000 miles. Others, replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Sealed type bearings.

GAS TANK: 16 gals.

BUICK RIVIERA—1966

KEY

- Conoco Super Lube
- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months; idler arm every 12,000 miles

POWER STEERING RESERVOIR (TA)
Every 6000 miles. Check level. Maintain to level mark

CRANKCASE (4 qts.)
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

SUPER TURBINE 400
(Approx. 3 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

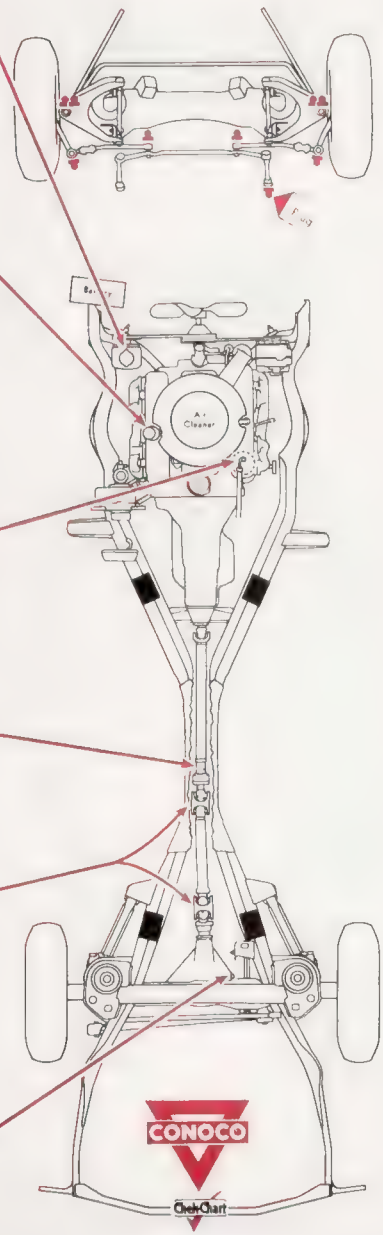
PROPELLER SHAFT SPLINE
Every 12,000 miles. Rotate shaft until plug aligns with hole in frame. Remove and replace plug
Special adapter required

CONSTANT VELOCITY JOINTS
Every 6000 miles. Lubricate centering ball only. Rotate shaft until depressed-type fitting aligns with hole in frame
Special adapter required

REAR AXLE (4¼ pts.)
(Also includes Positive Traction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80



COOLING SYSTEM: 17 qts. (with heater 18 qts.) With air conditioning 19¼ qts.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE
Install new valve every 6000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER
Replace filter every 24,000 miles, severe service 12,000 miles.

ELECTRO-CRUISE POWER UNIT AIR FILTER
Clean air filter every 6000 miles

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

GAS TANK: 22 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	27	70

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
Lowest reading cylinder must be more than 75% of the highest reading cylinder

SPARK PLUGS
AC 44S; for high-speed driving or hauling trailers, 42 Commercial
Gap: .035"
Torque: 30 ft. lb.

IGNITION POINTS
Delco
Gap: .016"
Dwell angle: 29°-31° (30° preferred)

CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 2, 7, 8, 4, 5, 6, 3

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug or distributor cap tower
5. Set engine to idle speed
6. Observe timing at crankshaft damper, turn distributor to obtain specified setting
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center): 2½°

FUEL PUMP
AC Part No. 6440033
Pressure: 5 lb. minimum at idle rpm
Volume: Not required

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
ROCHESTER 4-bbl. 4MC	1½	index	index

ENGINE IDLE SPEED
500 rpm* in DRIVE
Air Cond. 550 rpm* in DRIVE, unit turned OFF
* Idle compensator valve closed, if so equipped

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, make initial adjustment as follows:

1. Hold self-adjusting actuator off adjusting screw and turn adjusting screw until wheel can just be turned by hand. Drag should be equal at all wheels
2. Back off adjusting screw 30 notches (1 or 2 additional notches if drag persists)
3. Repeat procedure at each wheel

Bleeding sequence: LF, RF, LR, RR

BUICK LeSABRE, WILDCAT, ELECTRA—1965-'66

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
300-, 340-cu. in. engs.	24	61
401-, 425-cu. in. engs.	27	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
Lowest reading cylinder must be more than 75% of the highest reading cylinder

SPARK PLUGS

AC 44S; for high-speed driving or hauling trailers, 42 Commercial
Gap: .035"
Torque: 30 ft. lb.

IGNITION POINTS

Delco Gap: .016"
Dwell angle: 29°-31° (30° preferred)

CONDENSER

Delco Capacity: .18-.23 mfd

Cylinder Numbering Sequence

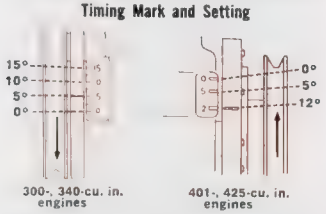
300-, 340-cu. in. engines — 401-, 425-cu. in. engines

Firing Order:
LeSabre 300, 340 engines **1, 8, 4, 3, 6, 5, 7, 2**
401, 425 engines **1, 2, 7, 8, 4, 5, 6, 3**

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug or distributor cap tower
5. Set engine to idle speed
6. Observe timing at crankshaft damper, turn distributor to obtain specified setting
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



300-, 340-cu. in. engines — 401-, 425-cu. in. engines

Timing Setting (Before Top Dead Center): 2½°*
* 425 eng. with dual 4-bbl. and Auto. Trans., 12°

FUEL PUMP

AC: 1965, model HE, except LeSabre 300 eng., model JU. 1966, 340 eng., Part No. 6440156; others, Part No. 6440033
Pressure: 5 lb. minimum at idle rpm; at carburetor height
Volume: Not required

CARBURETOR ADJUSTMENT

CARTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
4-bbl. AFB			
300, 340 engs.	1	index	1 rich
401, 425 engs.	¾	index	index
2/4-bbl. AFB 425 eng.	1	index	index
ROCHESTER			
2-bbl. 2GC	1½	index	index
4-bbl. 4GC	1½	index	index
4-bbl. 4MC	1½	index	index

ENGINE IDLE SPEED

Manual Trans.: 300, 340 engs. 550 rpm*
401, 425 engs. 500 rpm*
Auto. Trans.: 300, 340 engs. 550 rpm* in DRIVE
401, 425 engs. 500 rpm* in DRIVE
Air Cond.: 300, 340 engs. 600 rpm* in DRIVE, unit turned OFF
401, 425 engs. 550 rpm* in DRIVE, unit turned OFF
* Idle compensator valve closed, if so equipped

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LF, RF, LR, RR

KEY

- Conoco Super Lube
- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

POWER STEERING RESERVOIR (TA)
Every 6000 miles. Check level. Maintain to level mark

Lubricate front suspension and steering linkage every 6000 miles or 6 months; idler arm every 12,000 miles

CRANKCASE (4 qts.)
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR
Every 24,000 miles. Remove cap screw and check level

TRANSMISSION LINKAGE EQUALIZER
Every 6000 miles or 6 months. Lubricate thru hole in bottom of equalizer with rubber-tipped or tapered adapter

TRANSMISSION
3-Speed 300 cu. in. engine (2 pts.)
Others (3½ pts.) 4-Speed (2½ pts.)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90

SUPER TURBINE 300
(Approx. 2½ qts.)

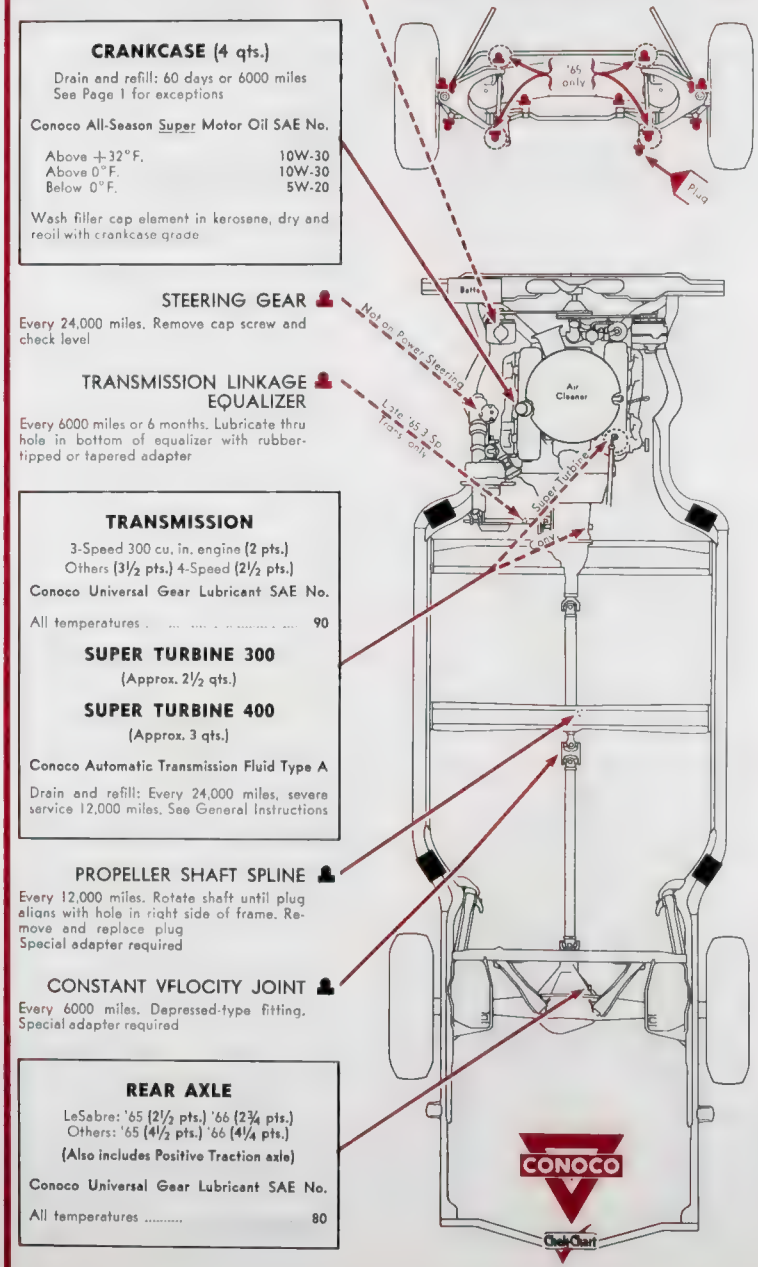
SUPER TURBINE 400
(Approx. 3 qts.)

Conoco Automatic Transmission Fluid Type A
Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

PROPELLER SHAFT SPLINE
Every 12,000 miles. Rotate shaft until plug aligns with hole in right side of frame. Remove and replace plug
Special adapter required

CONSTANT VELOCITY JOINT
Every 6000 miles. Depressed-type fitting. Special adapter required

REAR AXLE
LeSabre: '65 (2½ pts.) '66 (2¾ pts.)
Others: '65 (4½ pts.) '66 (4¼ pts.)
(Also includes Positive Traction axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 80



COOLING SYSTEM: Quarts

	1965	1966
LeSabre	11½	13¾
Others, 401 cu. in. eng.	16¾	17
Others, 425 cu. in. eng.	17¼	17

With heater add ¾ qt.-1 qt.
With air conditioning LeSabre 14½ qts., others 18¼ qts.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE
Install new valve every 6000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER
(All 1965 with Super Turbine 400 and early LeSabre with Super Turbine 300) Replace filter every 24,000 miles severe service 12,000 miles

ELECTRO-CRUISE POWER UNIT AIR FILTER
Clean air filter every 6000 miles.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

GAS TANK: 25 gals.

CADILLAC 1965-'66
ALL MODELS EXCEPT 1965 SERIES 75

KEY

- Conoco Super Lube M
- Service From Under Hood
- (TA) Conoco Automatic Transmission Fluid Type A
- Positions For Frame Engaging Lift Adapters

Inspect front suspension and steering linkage seals every 60 days or 6000 miles. Front suspension, repack every 30,000 miles or if noise develops, insert screwdriver between seal and retaining spring. Remove plugs and inject CONOCO SUPER LUBE M until approximately 2 teaspoonfuls escapes under seal at screwdriver. Install new plug. Steering linkage sealed—no service unless looseness is evident, then refer to Authorized Agency. See General Instructions

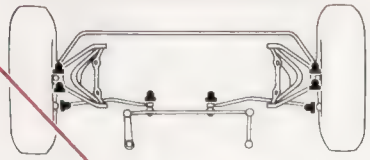
CRANKCASE (4 qts.)

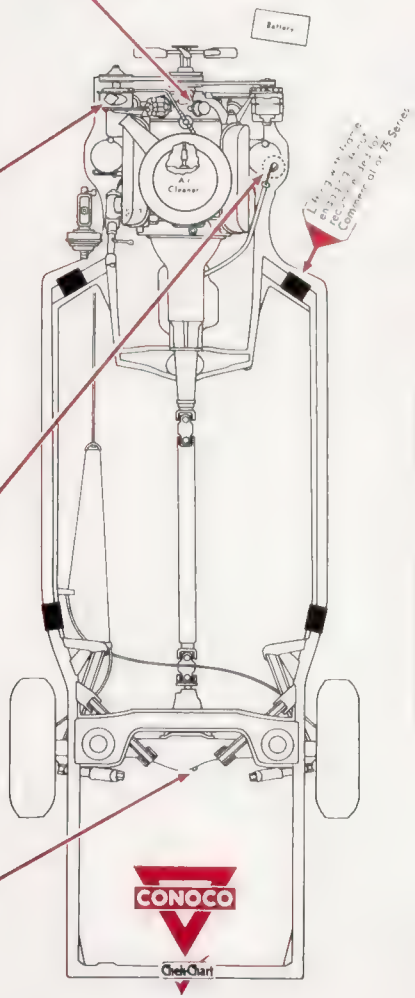
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service





POWER STEERING RESERVOIR (TA)

Every 12,000 miles. Check level. Maintain level to FULL mark on dipstick

TURBO HYDRA-MATIC DRIVE

(Approx. 2¼ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles, severe service 12,000 miles. Twist-lock dipstick on fill tube. See General Instructions

REAR AXLE (5 pts.)

(Also includes Controlled axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

COOLING SYSTEM: Quarts

	With Heater	Without Heater
1965	19	17½
1966 ex. 75 Series	18	16
With air cond.	19	—
75 Series	20½	—

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE

('65) Disassemble and clean every 6000 miles. ('66) Install new valve every 6000 miles.

FUEL FILTER

Replace fuel filter element every 12,000 miles.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES

Refer servicing to Authorized Agency.

GAS TANK: Commercial 20 gals., others 26 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	27C	73

COMPRESSION PRESSURE

(at cranking speed with throttle open)

	psi
All	165-185

SPARK PLUGS

AC 44
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS

Delco
Gap: Proper gap will be obtained with dwell angle of 30
Dwell angle: 28 -32° (30° preferred)

CONDENSER

Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 8, 7, 2, 6, 5, 4, 3

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape line opening
5. Disconnect parking brake vacuum line and tape line opening
6. Set idle speed with transmission in NEUTRAL
7. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
8. Reconnect vacuum lines and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center): 5°

FUEL PUMP

AC model 6744
Pressure: 5¼-6½ lb. at idle rpm
Volume: 1 pint in 17 strokes at cranking speed

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Auto. Trans.
CARTER		
4-bbl. AFB	2½	index
ROCHESTER		
4-bbl. 4GC	1½-2½	index

ENGINE IDLE SPEED

480 rpm in DRIVE
Air Cond. 900 rpm in NEUTRAL with unit turned ON

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF

CADILLAC ALL MODELS—1961-'64; SERIES 75—1965

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1961-63	60	70
1964	60	73
1965	60	73

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

All 165-185

SPARK PLUGS

AC 44
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS

Delco
Gap: Proper gap will be obtained with dwell angle of 30°
Dwell angle: 28°-32° (30° preferred)

CONDENSER

Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

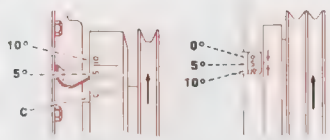
1961-62 1963 1964-65

Firing Order:
1961-62 1, 8, 4, 3, 6, 5, 7, 2
1963-64 1, 8, 7, 2, 6, 5, 4, 3

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Apply parking brake
5. Disconnect distributor vacuum line and tape line opening
6. Set idle speed with transmission in NEUTRAL 1961-62, DRIVE 1963-65
7. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



1961-62 1963-65

Timing Setting (Before Top Dead Center): 5°

FUEL PUMP

AC: 1961-62, model 4622; 1963-65, model 6744
Pressure: 1961-62, 5¼-6½ lb.; 1963, 5¼-6¼ lb.; 1964-65, 5¼-6½ lb.; at idle rpm
Volume: 1 pint in 17 strokes at cranking speed

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Auto. Trans.
CARTER		
1961-63 4-bbl. AFB	2½	1 rich
1964-65 4-bbl. AFB	2½	index
ROCHESTER		
1961-63 4-bbl. 4GC	1½-2½	1 rich
1964-65 4-bbl. 4GC	1½-2½	index

ENGINE IDLE SPEED

1961-62, 480 rpm; 1963-64, 480-500 rpm; 1965, 480 rpm in DRIVE
Air Cond. 900 rpm in NEUTRAL with unit turned ON

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

Inspect front suspension and steering linkage seals: '61-'62 every 4000 miles; '63-'65 every 60 days or 6000 miles. Front suspension: '61-'65, repack every 30,000 miles. Steering linkage: '61-'62, repack every 30,000 miles; '63-'65, sealed—no service unless looseness is evident, then refer to Authorized Agency. See General Instructions

CRANKCASE (4 qts.)

Drain and refill: '63-'65—60 days or 6000 miles
'61-'62 Winter—30 days
Summer—60 days
Do not exceed 4000 miles

See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

POWER STEERING RESERVOIR (TA)

Every 12,000 miles. Check level. '61-'62 maintain level to 1½" from top of reservoir. '63-'65 maintain level to FULL mark on dipstick

HYDRA-MATIC DRIVE (9 qts.)

All '61-'63; '64 except 62 convertibles and 60, 63 Series

TURBO HYDRA-MATIC DRIVE (2¼ qts.)

All '65, '64 60, 63 Series and 62 convertibles

Conoco Automatic Transmission Fluid Type A

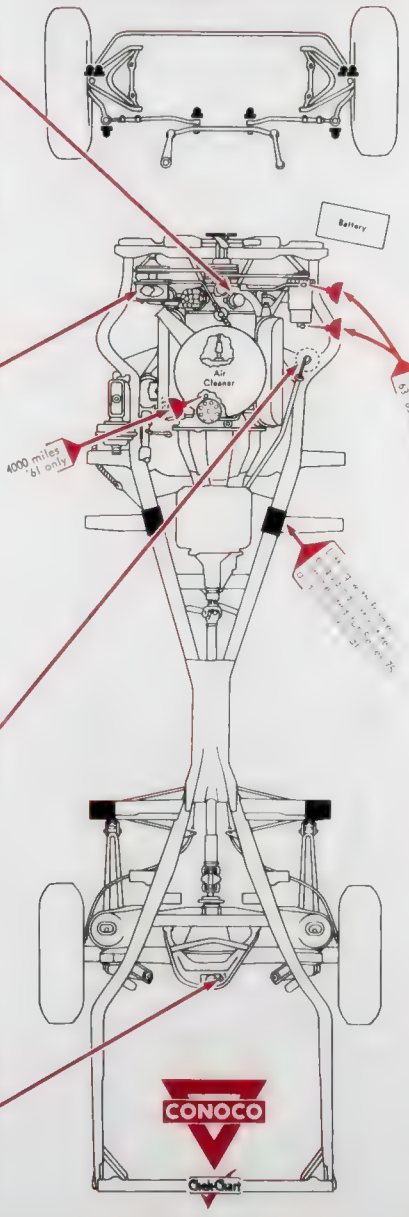
Drain and refill: '61-'62 every 16,000 miles, severe service 9000 miles. '63-'65 every 24,000 miles, severe service 12,000 miles. Turbo Hydra-Matic twist-lock dipstick on fill tube. See General Instructions

REAR AXLE (5 pts.)

(Also includes Controlled axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



COOLING SYSTEM: Quarts

		Without Heater	With Heater
'61-'62	Series 75	18½	20¾
	Others	18½	19¼
'63-'64	Series 75	16¼	19¾
	'65 Series 75	16	19½
'63-'64	Others	16¼	17¼

With air conditioning add 1 qt.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL SEASON Super MOTOR OIL SAE No. 10W 30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE

When equipped with closed crankcase ventilating system, clean every 4000 miles ('61-'62); 6000 miles ('63-'65)

FUEL FILTER

Replace fuel filter element every 12,000 miles.

OIL FILTER

Replace oil filter element at least every 4000 miles ('61-'62); 6000 miles ('63-'65)

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES

Refer servicing to Authorized Agency.

GAS TANK: 20-26 gals.

CHEVROLET V-8 ALL MODELS EXCEPT CORVETTE—1958-'62

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- Conoco Super Lube
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE OR SERVICE ALL POINTS EVERY 1000 MILES

CRANKCASE

409-cu. in. engine (5 qts.)
Others (4 qts.)

Drain and refill: Winter—30 days
Summer—60 days
Do not exceed 4000 miles

See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

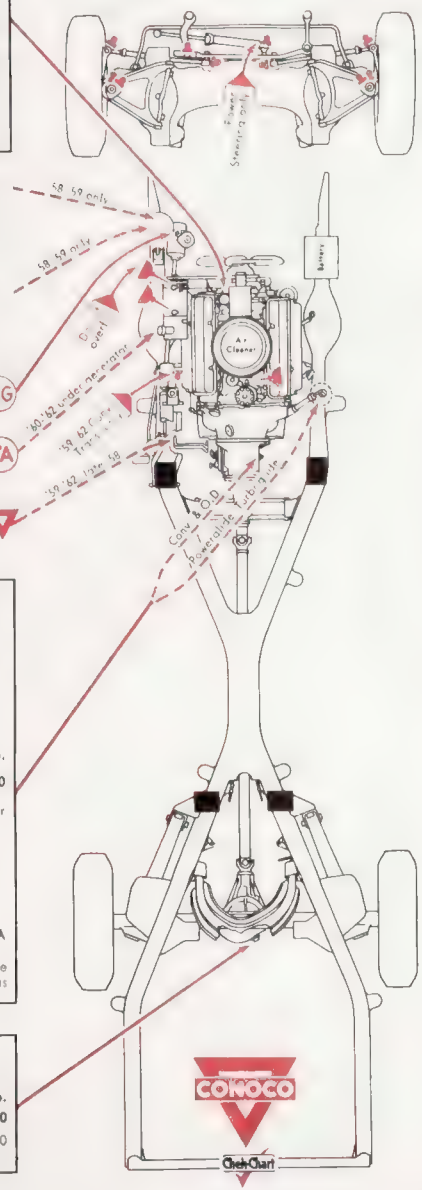
Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

LIFTING PRECAUTIONS

Models with Air Suspension, close shut-off valve located on frame to left of steering gear, before jacking or raising car with any free wheel type lift

COOLING SYSTEM: '58, **16 qts.**, '59-'62, **17 qts.** 348-cu. in. engine: '58, **22 qts.**, '59-'61, **21 qts.**, '62 409-cu. in. engine **21 qts.** (with heater add **1 qt.**)



AIR SUSPENSION ACCUMULATOR TANK

Open petcock to drain accumulated water and oil

AIR SUSPENSION VAPORIZER JAR

Fill jar ½ full in freezing weather, with Methanol Type Anti-Freeze

STEERING GEAR (SG)

Remove plug and fill

POWER STEERING RESERVOIR (TA)

Check level. Maintain to level mark

TURBOGLIDE CONTROL SHAFT

Coat linkage

TRANSMISSION

3-Speed (2 pts.) 4-Speed '58-'60 (1½ pts.) '61-'62 (2½ pts.)

TRANS. WITH OVERDRIVE (3 pts.)

Overdrive drain and fill thru transmission plugs

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

CAUTION: Fill slowly. Recheck level after short operation

POWERGLIDE (4½ qts.)

except '62 with removable pan (2 qts.)

TURBOGLIDE (2 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE (4 pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

Drain and refill: '58-'61 yearly or every 10,000 miles

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 5000 miles, clean in kerosene, and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE

Replace element every 10,000 miles.

AIR CLEANER—OIL BATH TYPE

Clean base every 2000 miles. Fill to level mark with 1 pt. CONOCO Super MOTOR OIL SAE No. 50, Summer; SAE No. 20W, Winter.

CRANKCASE VENTILATOR VALVE

When equipped with closed crankcase ventilating system, install new valve every 5000 miles.

FUEL FILTER

('60-'61) Replace fuel filter element every 12,000 miles. ('62) Replace bowl-type element every 5000 miles.

OIL FILTER

Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR SUSPENSION SYSTEM AIR CLEANER

Remove, wash and dry every 2000 miles.

POWER BRAKE AIR CLEANER

Remove, wash and dry screen and curled hair element every 2000 miles

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR HYDRO-LECTRIC MECHANISM

Refer servicing to Authorized Agency

SHOCK ABSORBERS

Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS

Sealed type bearings

UNIVERSAL JOINTS

Every 25,000 miles. See General Instructions

GAS TANK: **20 gals.** Sedan Delivery, Sedan Pick-Up, Station Wagon **17 gals.** '59-'60 9 pass. Station Wagon **18 gals.** '61-'62 Station Wagon **19 gals.**

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	53, 61
	24T	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

283, 348, 409 engines 150
283 engine with 2-bbl. carb. 140
327 engine 160

Maximum variations between cylinders, less than 20 psi

SPARK PLUGS

AC: All 1958 engs. and 1959-60 283 eng., 44; 1959-61 348 eng., 44N except 1960-61 348 eng. with spec. cam, 43N; 1961 283 eng., 45; 1962 283 eng., 46; 1962 327 eng., 44; 1962 409 eng., 43N
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS

Delco
Gap: .016", used, .019", new; dual points, .014", used, .018", new
Dwell angle: Single points, 28°-32°; dual points each set, 29°, total dwell, 33°-34°

CONDENSER

Delco Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center)
1958-59 348 eng., 4°; 1958-62 283 eng., 4°*; 1960-61 348 eng., 8°; 1962 327 eng., 4°**; 1962 409 eng., 12°
* With special cam, 12° ** Hi-perform. eng. 8°
(Each line equals 2°)

FUEL PUMP

AC mechanical
Pressure: 5¼-6½* lb. at idle to 1000 rpm
Volume: 1 pint in 45 seconds at idle rpm
* 1960-61, 348 eng. with spec. cam, 409 eng., 9¼-10¾ lb.

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. WCFB	1	index	index
4-bbl. AFB	1	index	—
ROCHESTER			
2-bbl. 2GC	1½	index*	index
4-bbl. 4GC	1-1½	—**	1 lean▲

* 1962, 1 lean ** 1962, index ▲327, 348 engs. index

ENGINE IDLE SPEED

Manual Trans. 500 rpm; 283 eng. with fuel injection, 500 rpm; except 409 eng. and others with special cam or fuel injection, 650 rpm
Auto. Trans. 475 rpm in DRIVE; except 283 eng. with fuel injection or special cam, 600 rpm. Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts

VALVE CLEARANCES

(engine hot and running)
With special cam and 409 eng.: Intake .008", exhaust .018"
Others: Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:

1. Loosen parking brake cable adjustment nuts
2. Using suitable tool, turn star wheel adjuster to expand shoes until a light, uniform drag is felt when turning drum
3. Back off adjuster 12 notches (1958, 7 notches)
4. Repeat operation at each wheel
5. Readjust parking brake cable

Bleeding sequence: LR, RR, RF, LF
Power brake (engine stopped), power brake slave cylinder, power brake valve **LR, RR, RF, LF**

CHEVROLET SIX ALL MODELS EXCEPT CORVAIR, CHEVY II—1958-'62

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	53, 61
	24T	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

All 130

Maximum variation between cylinders, less than 20 psi

SPARK PLUGS

AC 1958-60, 44; 1961, 45; 1962, 46
Gap: .035
Torque: 25 ft. lb.

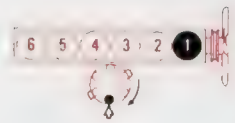
IGNITION POINTS

Delco
Gap: .016" used, .019" new
Dwell angle: 28°-35°

CONDENSER

Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence



Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Set octane selector to 0° on the scale
5. Set idle speed with transmission in NEUTRAL
6. Observe timing mark through opening in flywheel housing and turn distributor to obtain alignment of specified mark with pointer
7. Reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center)
1958, 0° (Steel ball aligned with pointer)
1959-62, 5° (First short radial mark clockwise from steel ball or stamped O aligned with pointer)

FUEL PUMP

AC model: 1958, 4433, 4666, 4434*; 1959-62, 4434
Pressure: 3½-4½ lb. at idle to 1000 rpm
Volume: 1 pint in 45 seconds at 1000 rpm
* Optional for electric wipers

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl. BC	2½	1 lean	index*

* 1962, 2 rich

ENGINE IDLE SPEED

Manual Trans.: 1958-61, 475 rpm; 1962, 500 rpm
Auto Trans. 475 rpm in DRIVE. Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated

Adjust the brakes as follows:

1. Loosen parking brake cable adjustment nuts
2. Using suitable tool, turn star wheel adjuster to expand shoes until a light, uniform drag is felt when turning drum
3. Back off adjuster 12 notches (1958, 7 notches)
4. Repeat operation at each wheel
5. Readjust parking brake cable

Bleeding sequence: LR, RR, RF, LF

Power brake (engine stopped), power brake slave cylinder, power brake valve **LR, RR, RF, LF**

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- Conoco Super Lube
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

CRANKCASE (5 qts.)

Drain and refill: Winter—30 days
Summer—60 days
Do not exceed 4000 miles

See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (SG)
Remove plug and fill

POWER STEERING RESERVOIR (TA)
Check level. Maintain to level mark

DISTRIBUTOR GREASE CUP

TRANSMISSION (2 pts.)

TRANS. WITH OVERDRIVE (3 pts.)

Overdrive drain and fill thru transmission plugs

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

CAUTION: Fill slowly. Recheck level after short operation

POWERGLIDE (4½ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

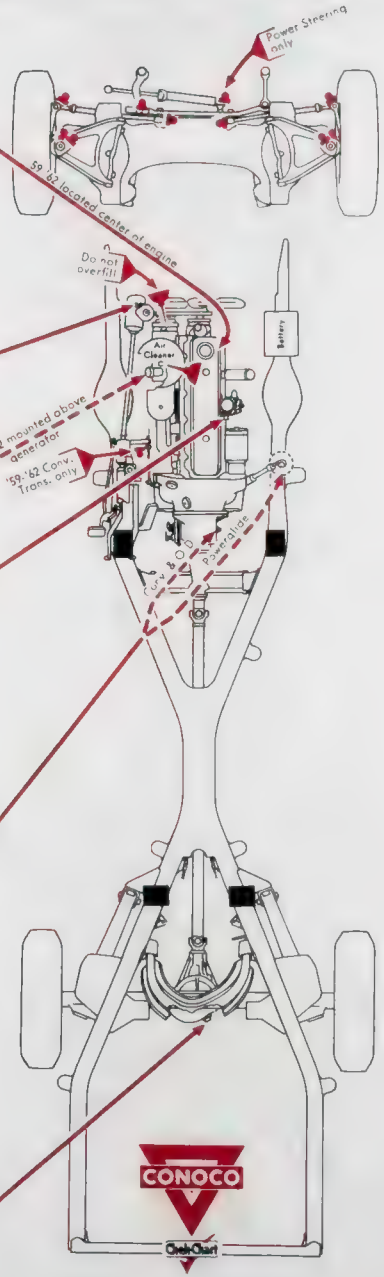
REAR AXLE (4 pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

Drain and refill: '58-'61 yearly or every 10,000 miles



COOLING SYSTEM: '58, 16½ qts., '59-'62, 17 qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER

Wash element in kerosene every 2000 miles dry and wet with CONOCO Super MOTOR OIL SAE No. 50

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 5000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—OIL BATH TYPE

Clean base every 2000 miles. Fill to level mark with 1 pt. CONOCO Super MOTOR OIL SAE No. 50, Summer; SAE No. 20W, Winter.

CRANKCASE VENTILATOR VALVE

When equipped with closed crankcase ventilating system, install new valve every 5000 miles

FUEL FILTER

Replace fuel filter element: Every 12,000 miles ('60-'61); ('62) only if carburetor flooding occurs.

OIL FILTER

Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

POWER BRAKE AIR CLEANER

Remove, wash and dry screen and curled hair element every 2000 miles.

HYDRO-LECTRIC MECHANISM

Refer servicing to Authorized Agency.

SHOCK ABSORBERS

Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS

Sealed type bearings.

UNIVERSAL JOINTS

Every 25,000 miles. See General Instructions.

GAS TANK: **20 gals.** Sedan Delivery, Sedan Pick-Up, Station Wagon **17 gals.** '59-'60 9 pass. Station Wagon **18 gals.** '61-'62 Station Wagon **19 gals.**

CHEVROLET CHEVY II 4, 6—1962-'66

KEY

- Conoco Super Lube
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

POWER STEERING RESERVOIR (TA)

'62 every 1000 miles; '63-'66 every 6000 miles or 6 months. Check level. Maintain to level mark at operating temperature and wheels in straight ahead position

Lubricate front suspension and steering linkage: '62 models every 1000 miles; '63-'66 models every 6000 miles or 6 months

COOLING SYSTEM: '62 4 Cyl. 8½ qts. 6 Cyl. 11½ qts. '63-'65 4 Cyl. 8 qts. 6 Cyl. '63-'65, 11 qts. '66, 10 qts. (with heater add ½ qt.-1 qt.)

CRANKCASE

4 Cyl. (3½ qts.) 6 Cyl. (4 qts.)

Drain and refill: '63-'66—60 days or 6000 miles
'62—Winter—30 days
Summer—60 days
Do not exceed 4000 miles

See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

STEERING GEAR

'62-'63 every 30,000 miles; '64-'66, 36,000 miles. Remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out other hole. Replace screws

POWERGLIDE SHIFT LINKAGE

Every 6000 miles. Coat linkage

TRANSMISSION (2 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

POWERGLIDE (2 qts.)

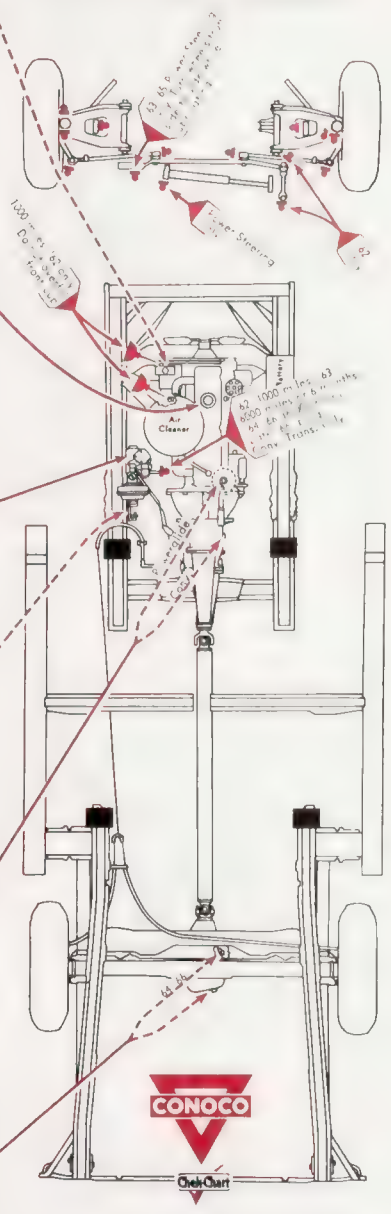
Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE

'62 (4 pts.) '63-'66 (3½ pts.)
Heavy-Duty (4 pts.)
(Also includes Positraction axle)

All temperatures	80



SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

CRANKCASE VENTILATOR

When equipped with closed crankcase ventilating system: Valve type, install new valve every 6000 miles; orifice type, clean hose and fittings as required.

FUEL FILTER

Replace fuel filter element in carburetor inlet only if flooding occurs.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR

Refer servicing to Authorized Agency.

UNIVERSAL JOINTS

(1962 '63) Every 30,000 miles. See General Instructions.

GAS TANK: 16 gals.

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44
Air conditioning	24	53
	24T	70

1966 models have bottom holddown

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
All	130

Maximum variation between cylinders, 20 psi

SPARK PLUGS
AC 46N; for continuous heavy-duty operation, 44N
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new
Dwell angle: 31°-34°

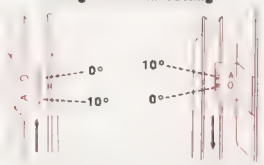
CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order:
4-cyl. 1, 3, 4, 2
6-cyl. 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 500 rpm
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



1962-63 1964-66

Timing Setting (Before Top Dead Center):
4-cyl. 4°; 6-cyl., 194 eng. 8°, 230 eng. 4°; California cars with A.I.R. and manual transmission, 3°
(Each line equals 2°)

FUEL PUMP
AC mechanical
Pressure: 1962-64, 3½-4½ lb.; 1965, 3¼-4½ lb.; 1966, 3-4½ lb.; at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle to 1000 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-cyl. 1-bbl. YF	1½	manual	manual
6-cyl. 1-bbl. YF	1½	*	*
ROCHESTER			
4-cyl. 1-bbl. B	2	manual	manual
6-cyl. 1-bbl. BC	2	index **	index **
1963-66 1-bbl. BV	1½		

* California cars with A.I.R., hold choke valve fully closed, bend choke rod at offset to obtain slight clearance (.015" max.) between fast idle cam and boss on carburetor bowl
** One rod dia. above top of hole in choke lever

ENGINE IDLE SPEED
Manual Trans.: 500 rpm†; California cars with A.I.R., 700 rpm
Auto. Trans.: 500 rpm in DRIVE*†; California cars with A.I.R., 600 rpm in DRIVE
* Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
† Air conditioning, set to normal idle speed with unit turned ON and idle compensator held closed

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

1962
With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
1963-66
Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LR, RR, RF, LF

CHEVROLET CORVAIR ALL MODELS EXCEPT 95—1960-'62

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	53	35, 42

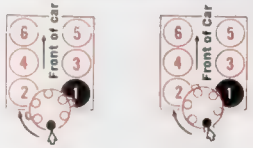
COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All ..... minimum 130
Maximum variation between cylinders, less than 20 psi

SPARK PLUGS
AC: 1960-61 Turbo-Air, 46FF; Super Turbo-Air, Monza with Powerglide and Turbocharged engines, 44FF. 1962, 44FF; Turbocharged, competition use, 42FF
Gap: .035" Torque: 20 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new
Dwell angle: 31°-34°

CONDENSER
Delco Capacity: .18-.23 mfd

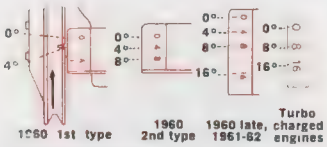
Cylinder Numbering Sequence



Firing Order: 1, 4, 5, 2, 3, 6

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening; except Turbocharged engines
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting. Note color of distributor oiler. Following colors are used: Bright (Cadmium-Zinc), copper, and black. See Timing Setting for recommendations
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
Turbo-Air: Manual Trans. 4° (Range 4°-8°)
Super Turbo-Air: Manual Trans. 12° (Range 12°-16°)
Automatic Trans. 12° (Range 12°-16°)
Note: Advance timing as far as possible within specifications, unless detonation (spark knock) occurs
Turbocharged, Manual Trans. 24°

FUEL PUMP
AC model 4704
Pressure: 4-5 lb. at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle speed

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
1962 (1) 1-bbl. YH	¾	1 rich	—
ROCHESTER			
1960 (2) 1-bbl. H	1½	index	index
1961 (2) 1-bbl. H	1½	manual	manual
1962 (2) 1-bbl. H	1½	index	index

ENGINE IDLE SPEED
Manual Trans. Turbo-Air, 450-500 rpm; Super Turbo-Air, 600-650 rpm; Turbocharged, 850 rpm Auto. Trans., 450-500 rpm in DRIVE. Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
1964: Air conditioning, set to normal idle speed with unit turned ON

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:
1. Loosen parking brake cable adjustment nut
2. Using a suitable tool inserted into adjustment slot in backing plate, expand shoes until a light uniform drag is felt when revolving drum
3. Back off adjustment 12 notches
4. Repeat operation at each wheel
5. Readjust parking brake cable

Bleeding sequence: LR, RR, RF, LF

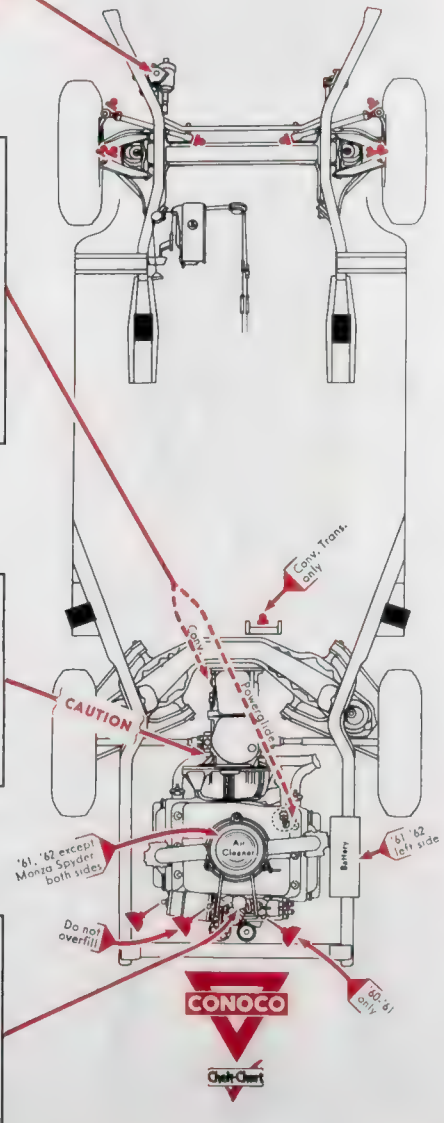
KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- SG Conoco Steering Gear Grease
- Service From Under Hood

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

LIFTING PRECAUTIONS
Never lift car with bumper jack

STEERING GEAR (SG)
Remove plug and fill



TRANSMISSION

3-Speed (2 pts.) 4-Speed (3 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

Drain and refill: Every 10,000 miles

POWERGLIDE (3 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE (3 pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

Drain and refill: Every 10,000 miles

CAUTION: If low, check 3-Speed or 4-Speed transmissions. Refill both units if necessary

CRANKCASE (4 qts.)

Drain and refill: Winter—30 days
Summer—60 days
Do not exceed 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 5000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super Motor OIL SAE No. 10W-30, remove excess oil and reinstall

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, install new valve every 5000 miles

ENGINE OIL COOLER
Every 5000 miles, remove cover, clean cooler with brush or compressed air. Replace cover

FUEL FILTER
('60-'61) Replace fuel filter elements every 12,000 miles. '62 except Monza Spyder, replace elements only if carburetor flooding occurs. Monza Spyder replace fuel filter in line every 10,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

GEARSHIFT LINKAGE
(Conventional models) Every 10,000 miles very sparingly coat gearshift lever ball and socket and control shaft universal joints with CONOCO SUPER LUBE. Remove floor cover and rubber boot to service control joint

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Every 25,000 miles. See General Instructions.

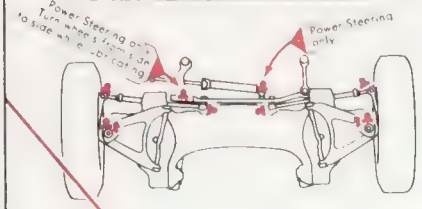
GAS TANK: '60, 11 gals. '61-'62, 14 gals.

CHEVROLET SIX IMPALA, BEL AIR, BISCAYNE—1963-'64

KEY

- Conoco Super Lube
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months



CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

STEERING GEAR (SG)

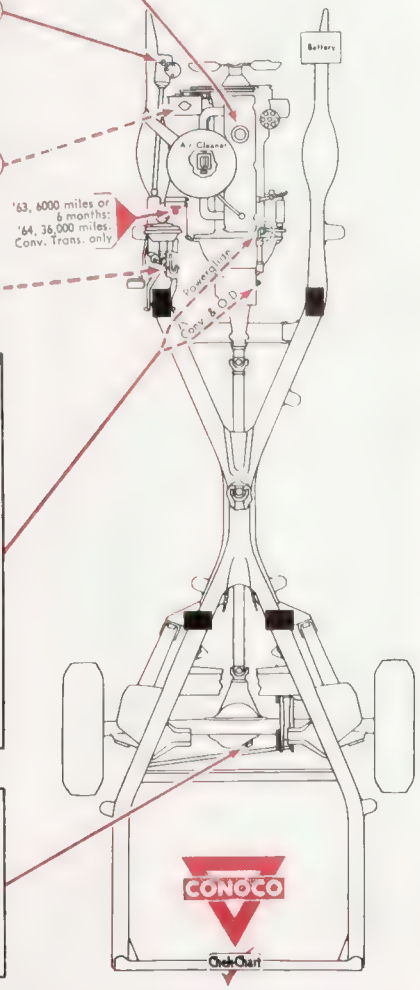
'63 every 6000 miles or 6 months: '64, 36,000 miles. '63, some early '64, remove plug and fill. Other '64, remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out of other hole. Replace screws

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain to level mark at operating temperature and wheels in straight ahead position

POWERGLIDE CONTROL SHAFT

Every 6000 miles or 6 months. Coat linkage



TRANSMISSION (2 pts.) TRANS. WITH OVERDRIVE (3 pts.)

Overdrive drain and fill thru transmission plugs

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

CAUTION: Fill slowly. Recheck level after short operation

POWERGLIDE (2 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE (4 pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

COOLING SYSTEM: 11½ qts. (with heater 12 qts.) With air conditioning add 2 qts.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—OIL BATH TYPE

Clean base every 6000 miles. Fill to level mark with 1 pt. CONOCO Super MOTOR OIL SAE No. 50, Summer; SAE No. 20W, Winter.

CRANKCASE VENTILATOR VALVE

Install new valve every 6000 miles.

FUEL FILTER

Replace fuel filter element in carburetor inlet only if flooding occurs.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR

Refer servicing to Authorized Agency.

SHOCK ABSORBERS

Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS

Sealed type bearings.

UNIVERSAL JOINTS

(1963) Every 30,000 miles. See General Instructions.

GAS TANK: 20 gals. Station Wagon 19 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44
Air Conditioning	24	53
	24T	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
All 130
Maximum variation between cylinders, 20 psi

SPARK PLUGS

AC 46N, for continuous heavy-duty operation, 44N
Gap: .035"
Torque: 25 ft. lb

IGNITION POINTS

Delco
Gap: .016" used; .019" new
Dwell angle: 31 -34

CONDENSER

Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
4° (Range, 4 -8)
(Each line equals 2)

FUEL PUMP

AC mechanical
Pressure: 3½-4½ lb. at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle rpm

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl. BV	1½	*	*

* One rod diameter above top of hole in choke lever

ENGINE IDLE SPEED

Manual Trans. 1963 475-525 rpm
1964 450-500 rpm
Auto. Trans. 1963 475-525 rpm in DRIVE
1964 450-500 rpm in DRIVE
Set idle speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
1964: Air conditioning, set to normal idle speed with unit turned ON and idle compensator held closed

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required.
Bleeding sequence: LR, RR, RF, LF
Power brake (engine stopped), power brake slave cylinder, power brake valve **LR, RR, RF, LF**

CHEVROLET CHEVY II V-8—1964-'66

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44
Air conditioning	24	53

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi

283 eng., Holley carb. 150
327 eng., Carter or Rochester carb. 160
327 eng., Holley carb. 150
Maximum variation between cylinders, 20 psi

SPARK PLUGS

AC. 283 eng., 45; 327 eng., 44
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS

Delco
Gap: .016" used; .019" new
Dwell angle: 28°-32°

CONDENSER

Delco
Capacity: .18-.23 mfd

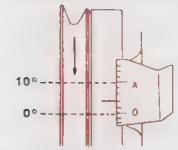
Cylinder Numbering Sequence

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):

283 eng., 4
327 eng.: 250-hp, 4°; 300-hp, 8°; 275-hp, 8°*; 350-hp, 10
(Each line equals 2°)
* California cars with A.I.R. and Auto. Trans., 2 ATDC

FUEL PUMP

AC mechanical
Pressure: 1965, 5¼-6½ lb.; 1966, 5-6½ lb.; at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle to 1000 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. AFB	1½	1 lean	1 lean
4-bbl. AVS	1½	*	*
HOLLEY			
4-bbl. 4150, -60	1½	*	*
ROCHESTER			
2-bbl. 2GV	1½	*	*
4-bbl. 4GC	1½	index	index
4-bbl. 4VM	1½	*	*

* ½ to 1 rod diameter above top of hole in choke lever

ENGINE IDLE SPEED

1966 327 350-hp eng.: 750 rpm†; with A.I.R. 750 rpm
All others: Man. Trans. 500 rpm†, with A.I.R. 700 rpm. Auto. Trans. 500 rpm*†; with A.I.R. 600 rpm; in DRIVE
* Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
† Air conditioning, set to normal idle speed with unit turned ON and idle compensator, if so equipped, held closed

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LR, RR, RF, LF

KEY

- Conoco Super Lube
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain to level mark at operating temperature and wheels in straight ahead position

CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

STEERING GEAR

Every 36,000 miles. Remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out other hole. Replace screws

POWERGLIDE SHIFT LINKAGE

Every 6000 miles. Coat linkage

TRANSMISSION

3-Speed (2 pts.)
3-Speed Heavy-Duty, 4-Speed (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

POWERGLIDE (2 qts.)

Conoco Automatic Transmission Fluid Type A

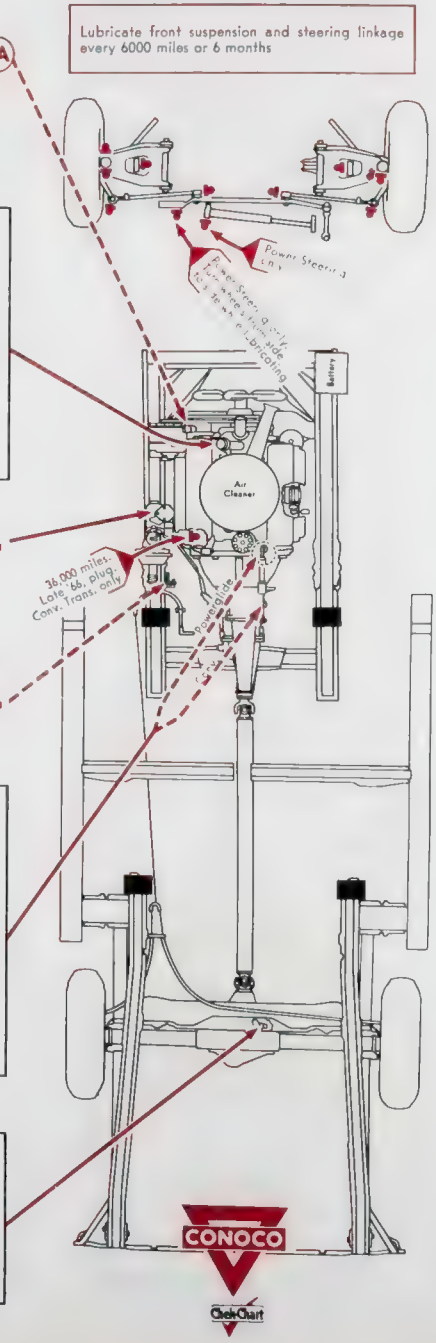
Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE

327 cu. in. engine or Heavy-Duty (4 pts.)
Others (3½ pts.)
(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80



COOLING SYSTEM: '66 327 cu. in. engine **15 qts.** Others **16 qts.** (with heater add **1 qt.**) With air conditioning **18 qts.**

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles

CRANKCASE VENTILATOR

Valve type: Install new valve every 6000 miles; orifice type, clean hose and fittings as required.

FUEL FILTER

Replace fuel filter element in carburetor inlet only if flooding occurs.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR

Refer servicing to Authorized Agency.

GAS TANK: 16 gals.

CHEVROLET V-8 IMPALA, BEL AIR, BISCAYNE—1963-'64

KEY

- Conoco Super Lube
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months

STEERING GEAR (SG)

'63 every 6000 miles or 6 months; '64, 36,000 miles. '63, some early '64, remove plug and fill. Other '64, remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out other hole. Replace screws

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain to level mark at operating temperature and wheels in straight ahead position

CRANKCASE

409 cu. in. engine (5 qts.)
Others (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

POWERGLIDE CONTROL SHAFT

Every 6000 miles or 6 months. Coat linkage

TRANSMISSION

3-Speed (2 pts.) 4-Speed (2½ pts.)

TRANS. WITH OVERDRIVE (3 pts.)

Overdrive drain and fill thru transmission plugs

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

CAUTION: Fill slowly. Recheck level after short operation

POWERGLIDE (2 qts.)

Conoco Automatic Transmission Fluid Type A

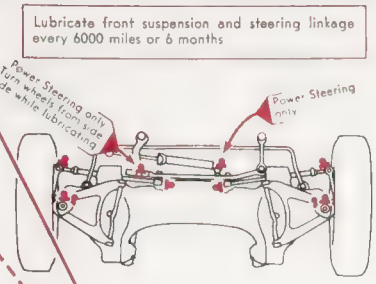
Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

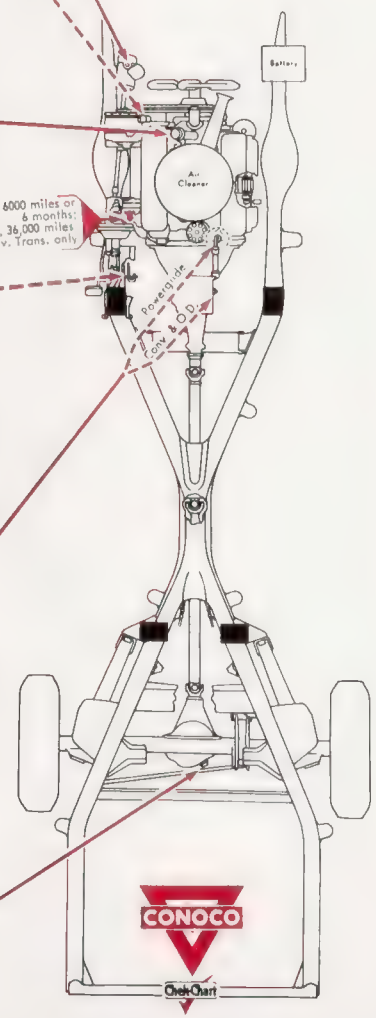
REAR AXLE (4 pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80





COOLING SYSTEM: Quarts

	1963	1964
283 engine	17½	16
327 engine	17½	15
409 engine	21	21
300 hp engine	—	17

With heater add 1 qt.
With air conditioning add 2 qts.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CRANKCASE VENTILATOR
Valve type: Install new valve every 6000 miles; orifice type, clean hose and fittings as required.

FUEL FILTER
Replace fuel filter element in carburetor inlet only if flooding occurs. Replace element in bowl-type filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
(1963) Every 30,000 miles. See General Instructions.

GAS TANK: 20 gals. Station Wagon 19 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
283 engine	22F	44
With air conditioning	24	53
327, 409 engines	24	61
	24T	70

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
283 engine 1963	140
1964	150
327 engine	160
409 engine	150

Maximum variation between cylinders, 20 psi

SPARK PLUGS
AC: 283 eng. 45; 327 eng. 44; 409 eng. 43N. For city type operation: 283 eng. 46; 327 eng. 45 or 46; 409 eng. 44N. For continuous heavy-duty operation: 283 eng. 44; 327 eng. 43; 409 eng. C42N
Gap: .035" Torque: 25 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new Dwell angle: 28 -32

CONDENSER
Delco Capacity: .18-.23 mfd

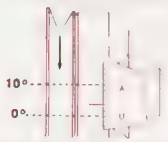
Cylinder Numbering Sequence

283, 327 engs. 409 eng.

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
1963: 283 eng. 4°; 327 eng. 4°*; 409 eng. 8°**
1964: 283; 327 engs. with WCFB or 4GC carb. 4 (Range, 4°-8°); 327 eng. with AFB carb. 8 (Range, 6°-12°); 409 eng. with 4GC carb. 6°; with spec. cam, 12
* Hi-performance engine, 8
** With solid lifters, 12
(Each line equals 2°)

FUEL PUMP
AC mechanical
Pressure: 283, 327, 409 engs. 5¼-6½ lb.; 409 eng with special cam 7¼-8½ lb.; at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. WCFB	1	index	index
4-bbl. AFB 327 eng.	1½	1 lean	index*
409 eng.	1½	2 lean	—
(2) 4-bbl. 409 eng.	1½-2	2 rich	—
ROCHESTER			
1963 2-bbl. 2GC	1½	1 lean ●	index
1964 2-bbl. 2GV	1½	1 lean ■	1 lean ■
4-bbl. 4GC	1-1½	index	index

* 1964, 1 lean
● Air conditioning equipped, index
■ One-half rod diameter above top of hole in choke lever

ENGINE IDLE SPEED
Manual Trans.: 450-500 rpm; except 409 eng. with Ser. No. suffix R/S 750-850 rpm; QA/QB 950-1000
Auto. Trans.: 1963 425-475 rpm; 1964 450-500 rpm; in DR. Set speed for smooth idle, no creep
1964: Air conditioning, set to normal idle speed, unit turned ON, idle compensator held closed

VALVE CLEARANCES
(engine hot and running)
409 Ser. No. suffix R/S: In. .012", ex. .020"; high speed, in. .018", ex. .030". Ser. No. suffix QA/QB: in. & ex. .025"; high speed, in. & ex. .030"
Others: Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LR, RR, RF, LF
Power brake (engine stopped), power brake slave cylinder, power brake valve **LR, RR, RF, LF**

CHEVROLET SIX IMPALA, BEL AIR, BISCAYNE—1965-'66

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44
Air conditioning	24	53
	24T	70

1966 models have bottom holddown

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
All 130
Maximum variation between cylinders, 20 psi

SPARK PLUGS

AC 46N; for continuous heavy-duty operation, 44N
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS

Delco
Gap: .016" used; .019" new
Dwell angle: 31°-34°

CONDENSER

Delco
Capacity: .18-.23 mfd

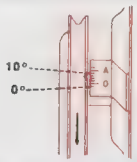
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
1965, 4°; 1966, 6°
(Each line equals 2°)

FUEL PUMP

AC mechanical
Pressure: 1965, 3¼-4½ lb.; 1966, 3-4½ lb.; at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle to 1000 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (Initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER 1-bbl. YF	1½	*	*
ROCHESTER 1-bbl. BV	1½	**	**

* California cars with A.I.R., hold choke valve fully closed, bend choke rod at offset to obtain slight clearance (.015" max.) between fast idle cam and boss on carburetor bowl
** One rod dia. above top of hole in choke lever

ENGINE IDLE SPEED

Manual Trans.: 500 rpm†; California cars with A.I.R., 700 rpm
Auto. Trans.: 500 rpm in DRIVE*†; California cars with A.I.R., 600 rpm in DRIVE
* Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
† Air conditioning, set to normal idle speed with unit turned ON and idle compensator held closed

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required

Bleeding sequence: LR, RR, RF, LF

Power brake (engine stopped), power brake slave cylinder, power brake valve LR, RR, RF, LF

KEY

- Conoco Super Lube
- TA Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

Lubricate front suspension and steering linkage every 6000 miles or 6 months

COOLING SYSTEM: 12 qts. With air conditioning '65, 14 qts., '66, 13 qts.

POWER STEERING RESERVOIR (TA)

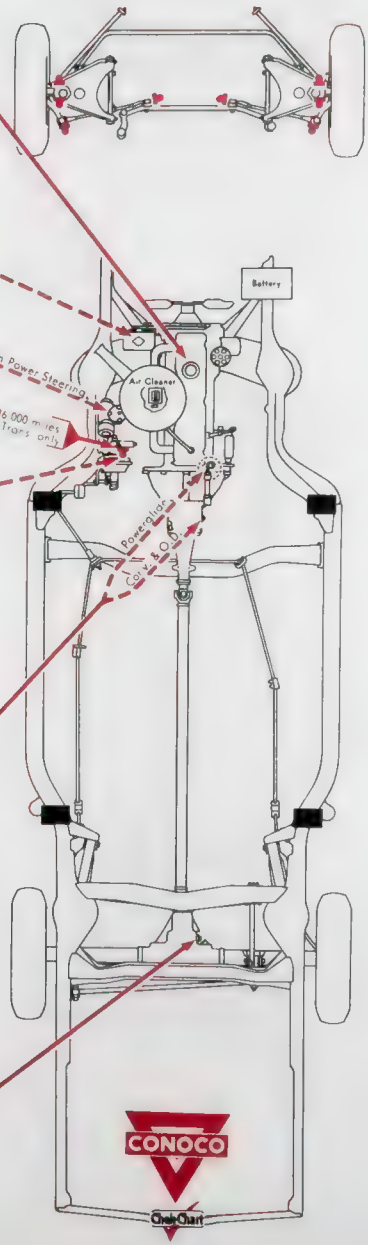
Every 6000 miles or 6 months. Check level. Maintain level to mark at operating temperature

STEERING GEAR

Every 36,000 miles. Remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out other hole. Replace screws

POWERGLIDE SHIFT LINKAGE

Every 6000 miles. Coat linkage



TRANSMISSION (2 pts.) TRANS. WITH OVERDRIVE (3 pts.)

Overdrive drain and fill thru transmission plugs

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

CAUTION: Fill slowly. Recheck level after short operation

POWERGLIDE (2 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE

Station Wagon, Heavy-Duty axle (4 pts.)
Others (3½ pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstal

CRANKCASE VENTILATOR

Valve type: Install new valve every 6000 miles: orifice type, clean hose and fittings as required

FUEL FILTER

Replace fuel filter element in carburetor only if flooding occurs

OIL FILTER

Replace oil filter element at least every [illegible] miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR

Refer servicing to Authorized Agency.

GAS TANK: 20 gals. Station Wagon 23½ gals.

CHEVROLET CORVAIR ALL MODELS EXCEPT 95—1963-'64

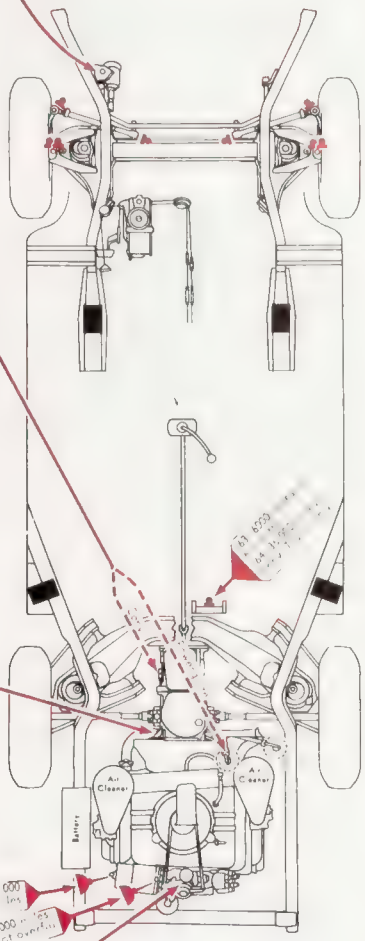
KEY

- Conoco Super Lube
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

LIFTING PRECAUTIONS
Never lift car with bumper jack

Lubricate front suspension and steering linkage every 6000 miles or 6 months

STEERING GEAR (SG)
'63 every 6000 miles or 6 months; '64, 36,000 miles. Remove plug and fill



TRANSMISSION
3-Speed (2 pts.) 4-Speed (3 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

POWERGLIDE (3 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE (4½ pts.)
(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

'64, check level with dipstick in engine compartment

CAUTION: If low, check 3-Speed or 4-Speed transmissions. Refill both units if necessary

CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

CONOCO Chek-Chart

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane elements every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 6000 miles. Fill to level mark with 1 pt. CONOCO Super MOTOR OIL SAE No. 50, Summer; SAE No. 20W, Winter.

CRANKCASE VENTILATOR
Valve type: Install new valve every 6000 miles; orifice type, clean hose and fittings as required.

ENGINE OIL COOLER
Every 12,000 miles, remove cover, clean cooler with brush or compressed air. Replace cover.

FUEL FILTER
Turbo-Charged models replace fuel filter in fuel line at left of air cleaner every 12,000 miles. Others replace filter elements only if carburetor flooding occurs.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

GEARSHIFT LINKAGE
(Conventional models) Every 12,000 miles very sparingly coat gearshift lever ball and socket pivot and control shaft connector with CONOCO SUPER LUBE. Remove tunnel cover and rubber boot to service lever ball and socket.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
(1963) Every 30,000 miles. See General Instructions

GAS TANK: 14 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	53	42

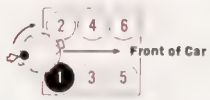
COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All ..... minimum 130
Maximum variation between cylinders, 20 psi

SPARK PLUGS
AC: Turbo-Air, 46FF; Super Turbo-Air, Monza with Powerglide and Turbo-Charged engines, 44FF; Turbo-Charged, competition use, 42FF; 1963 Turbo-Air, for continuous heavy-duty operation, 44FF
Gap: .035", except 1964 44FF, .030"
Torque: 20 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new
Dwell angle: 31 -34

CONDENSER
Delco
Capacity: .18-.23 mfd

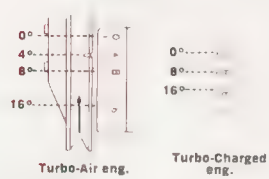
Cylinder Numbering Sequence



Firing Order: 1, 4, 5, 2, 3, 6

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening; except Turbo-Charged engines
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
Turbo-Air: Manual Trans. 4 (Range 4 -8)
Super Turbo-Air: Manual Trans. 12 (Range 12 -16)
Auto. Trans. 12 (Range 12 -16)
Note: Advance timing as far as possible within specifications unless detonation (spark knock) occurs.
Turbo-Charged Manual Trans 24

FUEL PUMP
AC mechanical
Pressure: 4-5 lb. at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
1-bbl. YH	¾	1 lean	—
ROCHESTER			
(2) 1-bbl. H	1½	*	*

* 2 turns up from free entry in lever

ENGINE IDLE SPEED
Manual Trans.: Turbo-Air, 450 500 rpm
Super Turbo-Air, 600-650 rpm
Turbo-Charged, 850 rpm
Auto. Trans. 450-500 rpm in DRIVE. Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
1964: Air conditioning, set to normal idle speed with unit turned ON

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LR, RR, RF, LF

CHEVROLET V-8 CAPRICE, IMPALA, BEL AIR, BISCAYNE—1965-'66

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
283 engine	22F	44
Air conditioning	24	53
327, 396, 409, 427 engs.	24	61
	24T	70

1966 models have bottom holddown

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

283 engine 150
327, 396; 427 390-hp engs. 160
409; 427 425-hp engs. 150
Maximum variation between cylinders, 20 psi

SPARK PLUGS

AC: 283 eng., 45; 327 eng., 44; 396, 409, 427 engs., 43N
Gap: .035" Torque: 25 ft. lb.

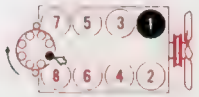
IGNITION POINTS

Delco Gap: .016" used; .019" new
Dwell angle: 28 -32

CONDENSER

Delco Capacity: .18-.23 mfd

Cylinder Numbering Sequence

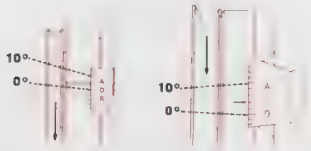


Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

Follow procedure listed for 1964-66 Chevrolet Chevelle V-8

Timing Mark and Setting



396, 427 engs. Others

Timing Setting (Before Top Dead Center):
283; 396 325-, 360-hp; 327 250-hp; 427 390-hp engs., 4
327 275-, 300-hp; 427 425-hp engs., 8 *
396 325-hp eng. with Transistor Ignition, 6
396 425-hp eng., 10
409 340-hp eng., 6*; 400-hp, 12
(Each line equals 2°)
* With A.I.R. and Auto. Trans., 2 ATDC

FUEL PUMP

AC mechanical
Pressure: 1965 283, 327 engs. 5¼-6½ lb., 396 eng. 5½-7½ lb., 409 eng. 7¼-8½ lb.; 1966, all 5-6½ lb.; at idle to 1000 rpm
Volume: One pint in 30-45 seconds at idle to 1000 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. AFB 327 eng.	1½	1 lean	1 lean
AFB 409 eng.	1½	2 lean	2 lean
4-bbl. AVS	1½	*	*
4-bbl. WCFB	1½	index	index
HOLLEY			
4-bbl. 4150 (1965)	1½	2 lean	—
4150, -60 (1966)	1½	*	*
ROCHESTER			
2-bbl. 2GV	1½	*	*
4-bbl. 4GC	1½	index	index
4-bbl. 4MV	1½	*	*

* ½ to 1 rod diameter above top of hole in choke lever

ENGINE IDLE SPEED

283, 327; 409 340-hp engs.: Man. Trans., 500 rpm†; with A.I.R. 700 rpm. Auto. Trans., 500 rpm*†; with A.I.R. 600 rpm; in DRIVE
396 325-hp eng.: Man. Trans., 500 rpm†. Auto. Trans. 500 rpm†; with A.I.R. 500 rpm†; in DRIVE
396 360-hp; 427 390-hp engs.: Man. Trans., 550 rpm†. Auto. Trans. 550 rpm*†; with A.I.R. 550 rpm†; in DRIVE
409 400-hp eng., 750-800 rpm†
427 425-hp eng., 750 rpm†
* Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
† Air conditioning, set to normal idle speed with unit turned ON and idle compensator, if so equipped, held closed

VALVE CLEARANCES

(engine hot and running)
409 400-hp eng.: Intake .025"; exhaust .025"; for sustained high speed, intake .030"; exhaust .030"
427 425-hp eng.: Intake .020"; exhaust .024"
Others: Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required

Bleeding sequence: LR, RR, RF, LF

Power brake (engine stopped), power brake slave cylinder, power brake valve **LR, RR, RF, LF**

KEY

- Conoco Super Lube
- TA Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months

CRANKCASE (4 qts.)

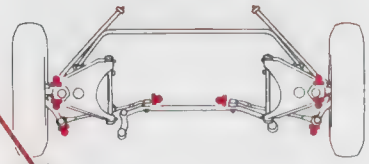
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F. 10W-30
Above 0°F. 10W-30
Below 0°F. 5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

COOLING SYSTEM: 16 qts.-24 qts.



396, 427 cu.in. engines on right or left valve cover

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain to level mark at operating temperature

STEERING GEAR

Every 36,000 miles. Remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out of other hole. Replace screws

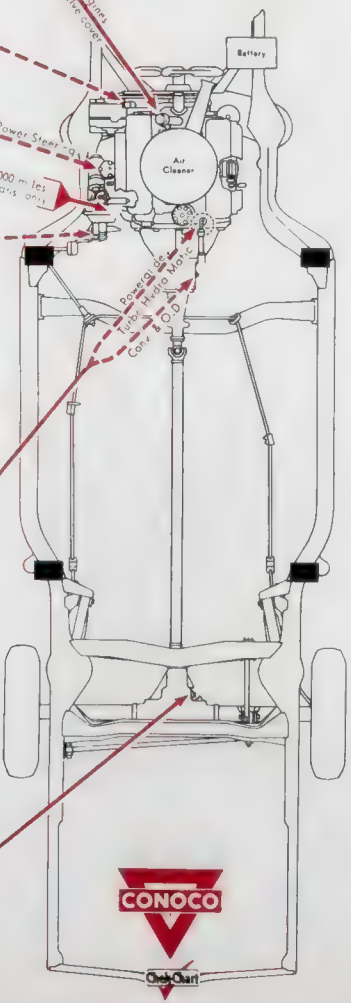
Nut on Power Steering Gear

36,000 miles Conv. Trans. only

POWERGLIDE SHIFT LINKAGE

Every 6000 miles. Coat linkage

Powerglide Turbo Hydra-Matic Conv. & O.D.



TRANSMISSION

3-Speed (2 pts.) 3-Speed Heavy-Duty, 4-Speed (2½ pts.)

TRANS. WITH OVERDRIVE (3 pts.)

Overdrive drain and fill thru transmission plugs

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

CAUTION: Fill slowly. Recheck level after short operation

POWERGLIDE (2 qts.)
TURBO HYDRA-MATIC (3¾ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE

327, 396, 409, 427 cu. in. engs., Station Wagon, Heavy-Duty axle (4 pts.)
Others (3½ pts.)
(Also includes Positraction axle)

All temperatures 80

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

CRANKCASE VENTILATOR

Valve type: Install new valve every 6000 miles; orifice type, clean hose and fittings as required.

FUEL FILTER

Replace fuel filter element in carburetor inlet only if flooding occurs. Replace element in bowl-type filter or element in fuel line every 12,000 miles

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR

Refer servicing to Authorized Agency.

GAS TANK: 20 gals. Station Wagon 23½ gals.

CHEVROLET CORVETTE—1963-'66

KEY

- Conoco Super Lube
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months

CRANKCASE

250-, 300-, 350- ('65) and 390-hp engines **(4 qts.)**
340-, 350- ('66), 360-, 365-, 375 and 425-hp engines **(5 qts.)**

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

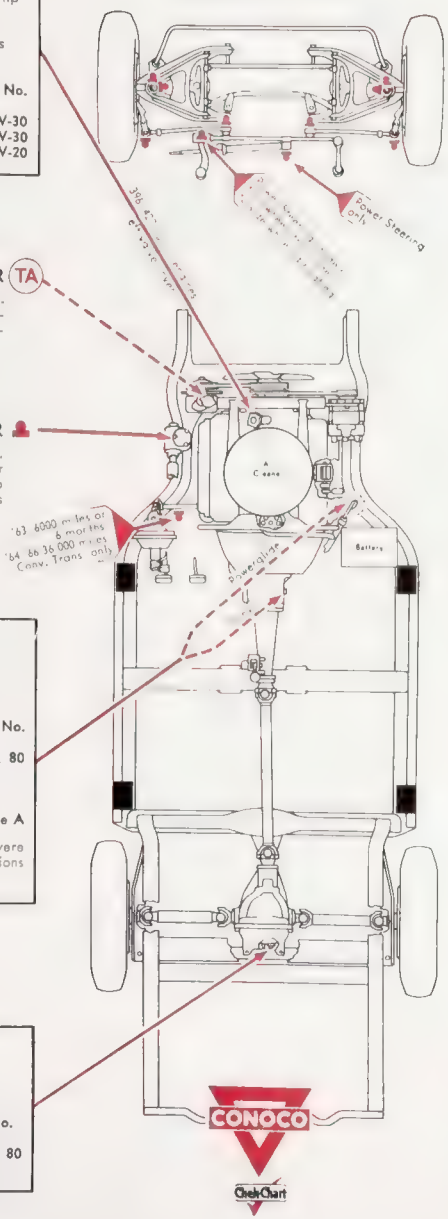
Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain to level mark at operating temperature and wheels in straight ahead position

STEERING GEAR

'63 every 30,000 miles; '64-'66, 36,000 miles. Remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out of other hole. Replace screws



TRANSMISSION

3-Speed **(2 pts.)** 4-Speed **(2½ pts.)**

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

POWERGLIDE (2 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE (3¾ pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

COOLING SYSTEM: ('63-'66) 327 cu. in. engine **18 qts.** ('65) 396 cu. in. engine **21½ qts.** ('66) 427 cu. in. engine **22 qts.** (with heater add **1 qt.**)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

CRANKCASE VENTILATOR

'63-'65 orifice type, clean hose and fittings as required. '66 install new valve every 6000 miles.

FUEL FILTER

Replace element in bowl-type fuel filter every 12,000 miles. Replace element in carburetor fuel inlet only if flooding occurs.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

DISTRIBUTOR CAM LUBRICATOR

Refer servicing to Authorized Agency.

SPRINGS

Equipped with friction inserts. Do not lubricate.

REAR WHEEL BEARINGS

(1963) Repack every 30,000 miles. Refer to Authorized Agency.

UNIVERSAL JOINTS

(1963) Every 30,000 miles. See General Instructions.

GAS TANK: 20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY	AABM Group No.	Amp. Hrs.
All	24	61

1966 models may have bottom holddown

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
327-cu. in. 250-, 300-hp engs. 160
427-cu. in. 390-hp eng. 160
All other engines .. 150
Maximum variation between cylinders: 1963-65, 15 psi; 1966, 20 psi

SPARK PLUGS
AC: 327 engine, moderate service 44; city driving only 45 or 46; heavy-duty service 43C. 396 and 427 engines, moderate service 43N, heavy-duty service C42N
Gap: .035" Torque: 25 ft. lb.

IGNITION POINTS
Delco Gap: .016" used; .019" new
Dwell angle: 28 -32°

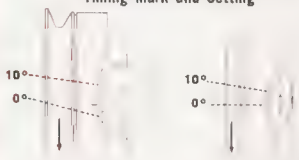
CONDENSER
Delco Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: **1, 8, 4, 3, 6, 5, 7, 2**

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set speed at idle, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line, reset idle speed

Timing Mark and Setting



327 eng. 396, 427 engs.

Timing Setting (Before Top Dead Center):
327-cu. in. eng. with Carter carb., 8 ; 300-hp with Holley carb., 6 *; 350-hp, 10 , 365-hp or with fuel injection, 12
396-cu. in. eng., 12
427-cu. in. eng : 390-hp, 4 ; 425-hp, 8
(Each line equals 2)
* With A.I.R. and Auto. Trans., 4 ATDC

FUEL PUMP
AC mechanical
Pressure: 1963, 1964, 1965 250-, 300-, 350-hp engs. 5¼-6½ lb.; 1965 365-, 375-hp engs. 6½-7½ lb., 396-cu. in. eng. 5½-7½ lb.; 1966, all engines, 5-6½ lb.: at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle to 1000 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. AFB	1½	1 lean	1 lean
4-bbl. WCFB	1	index	index
HOLLEY			
4-bbl. 327 eng. 1964-65	1	1 lean	1 lean
4-bbl. 327 eng. 1966	1½	*	*
4-bbl. 396 eng.	1½	2 lean	—
4-bbl. 427 eng. 390-hp.	1½	*	*
4-bbl. 427 eng. 425-hp.	1½	*	—
ROCHESTER			
4-bbl. 4MV	1½	*	*

* ½ to 1 rod diameter above top of hole in choke lever

ENGINE IDLE SPEED
327 eng.: 250-, 300-hp, Man. Trans. 500 rpm†; with A.I.R. 700 rpm; Auto. Trans. 500 rpm*†, with A.I.R. 600 rpm, in DRIVE. 340-, 350-hp, 750 rpm. 365-hp, 750-850 rpm. Fuel injection, 850 rpm
396 eng.: 750-850 rpm
427 eng.: 390-hp, Man. Trans. 550 rpm†; Auto. Trans. 550 rpm*†, with A.I.R. 550 rpm†, in DRIVE. 425-hp, 750 rpm†
* Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
† Air conditioning, set to normal idle speed with unit turned ON and idle compensator held closed

VALVE CLEARANCES
(engine hot)
340-, 360-hp engs.: Intake .008"; exhaust .018"
365-, 375-hp engs.: Intake .030"; exhaust .030"
425-hp eng.: Intake .020"; exhaust .024"
250-, 300-, 350-, 390-hp engs.: Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required
Disc brakes, replace lining when thickness has worn to 1/16 inch or groove in center of lining is gone. Replace metallic linings when worn to 1/32 inch
Bleeding sequence: LR, RR, RF, LF

CHEVROLET CORVAIR ALL MODELS EXCEPT GREENBRIER—1965-'66

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44
	24T	70

1966 models may have bottom holddown

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All ..... minimum 130
Maximum variation between cylinders, 20 psi

SPARK PLUGS
AC 46FF Turbo-Air 95 hp.; AC 44FF others
Gap: AC 46FF, .035"; AC 44FF, .030"
Torque: 20 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new
Dwell angle: 31°-34°

CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Without Air Conditioning — With Air Conditioning

Firing Order: 1, 4, 5, 2, 3, 6

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening; except Turbocharged engines
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting:			California cars with A.I.R.
95 hp	Man. Trans.	6° BTDC	9° ATDC
	Auto. Trans.	14° BTDC	4° ATDC
110 hp	Man. Trans.	14° BTDC	1° ATDC
	Auto. Trans.	14° BTDC	4° BTDC
140 hp	Man. Trans.	18° BTDC	3° BTDC
	Auto. Trans.	18° BTDC*	8° BTDC
Turbocharged	All	24° BTDC	—

* 1965 with air conditioning, 24° BTDC

FUEL PUMP
AC mechanical
Pressure: 1965, 4-5 lb.; 1966, 3½-5 lb.; at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
1-bbl. YH 1965	1½	index	—
1966	1½	1 lean	—
ROCHESTER			
1-bbl. HV	1½	*	*

* ½ to 1 rod diameter above top of hole in choke lever

ENGINE IDLE SPEED
Manual Trans.: 95 hp 500 rpm; 110, 140 hp 650 rpm; Turbocharged 850 rpm; California cars with A.I.R., 700 rpm
Auto. Trans.: 500 rpm in DRIVE*; California cars with A.I.R., 600 rpm in DRIVE
Air conditioning set to normal idle speed with unit turned ON and idle compensator held closed; set speed-up solenoid to increase idle 50 rpm
* Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LR, RR, RF, LF

KEY

- Conoco Super Lube
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

LIFTING PRECAUTIONS
Never lift car with bumper jack

Lubricate front suspension and steering linkage every 6000 miles or 6 months

STEERING GEAR
Every 36,000 miles. Remove plug and fill

TRANSMISSION
3-Speed (2 pts.) 4-Speed (3 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

POWERGLIDE (3 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE (4½ pts.)
(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

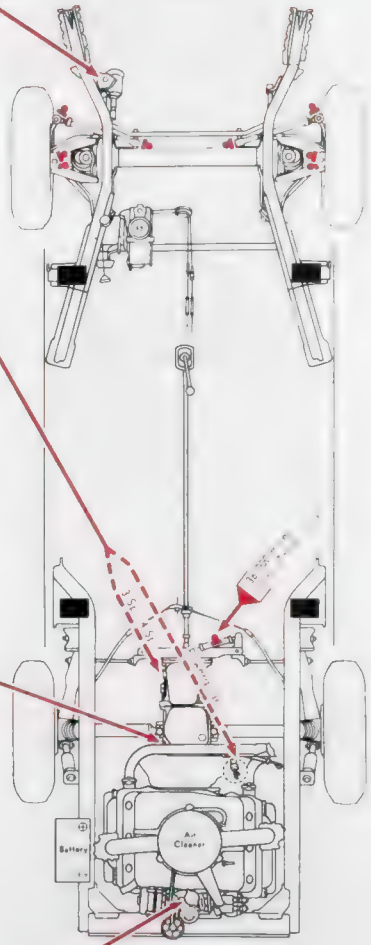
65 check level with dipstick in engine compartment

CAUTION: If low, check 3-Speed or 4-Speed transmissions. Refill both units if necessary

CRANKCASE (4 qts.)
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20



CONOCO
Quick Chart

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace elements every 6000 [illegible]

AIR CLEANER—OIL BATH TYPE
[illegible]

CRANKCASE VENTILATOR
[illegible]

ENGINE OIL COOLER
[illegible]

FUEL FILTER
[illegible]

OIL FILTER
[illegible]

GEARSHIFT LINKAGE
[illegible]

FRONT WHEEL BEARINGS
[illegible]

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
[illegible]

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency

GAS TANK: 14 gals.

CHRYSLER, IMPERIAL 1962-'63

KEY

- Conoco Super Lube M
- Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1963 Chrysler Corp. cars have a five-year or 50,000-mile factory warranty on power train components. The lubricants and service intervals on these cars completely satisfy warranty requirement

POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension every 32,000 miles. **CAUTION:** Apply sparingly See General Instructions

CRANKCASE (5 qts.)
Drain and refill: 2 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

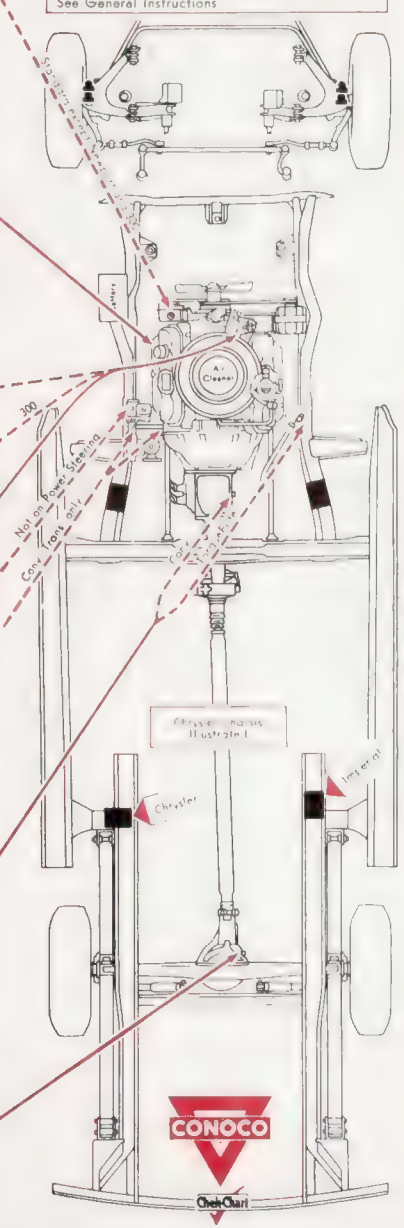
DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR GREASE CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (90)
Every 4000 miles. Remove plug and fill

TORQUE SHAFT
Every 32,000 miles. Disassemble, clean and repack both ends



TRANSMISSION (3½ pts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: '62 every 32,000 miles

TORQUEFLITE TRANSMISSION (9 qts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: '62 every 32,000 miles. See General Instructions

REAR AXLE (4 pts.)
(Also includes Sure-Grip axle)
Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Drain and refill: Every 20,000 miles

COOLING SYSTEM: 16 qts. (with heater 17 qts.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 8000 miles.

CRANKCASE BREATHER
Every 8000 miles wash element in kerosene, dry and recoil with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

FUEL FILTER
Replace fuel filter element every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER
Replace filter at time of transmission drain.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions.

UNIVERSAL JOINT SPLINE
(Imperial) Every 32,000 miles, repack spline, located at back of front joint, half full with CONOCO UNIVERSAL GEAR LUBRICANT SAE No. 90.

GAS TANK: 23 gals. Town & Country 21 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
Newport, 300	24H	59
	27H	70
New Yorker, 300H, -J, Imperial	27H	70

COMPRESSION PRESSURE
(psi at cranking speed, throttle open)

	min.	max.
Newport	125	155*
New Yorker, 300, -H, -J, Imperial	130	165**

* Maximum variation between cylinders, 20 psi
** Maximum variation between cylinders, 25 psi

SPARK PLUGS
Champion: 300H, -J; 1962 413 eng. with (2) 4-bbl. carbs.; 1963 300, Newport with dual points, J-9Y, other Chrysler, Imperial, J-12Y
Gap: .035" Torque: 30 ft. lb.

IGNITION POINTS
Chrysler: Newport, 300, New Yorker, Imperial
Autolite: 300H, -J; 1963 300, Newport (dual points)
Gap: .014"-.019"
Dwell angle: 1963: Imperial, New Yorker, single points, 28° -33°; others, single points and each set of dual points, 27° -32°; dual points total dwell, 34° -40°

CONDENSER
Chrysler: Newport, 300, New Yorker, Imperial
Autolite: 300H, -J; 1963 300, Newport (dual points)
Capacity: .25-.285 mfd

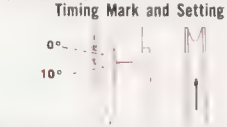
Cylinder Numbering Sequence

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
   Note: Do not puncture spark plug cables
4. Disconnect vacuum line at distributor
5. Set idle speed to 475-500 rpm*, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Tighten distributor clamp and recheck alignment of timing mark
8. Reconnect vac. line and reset to proper idle

* Imperial, 500 rpm

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
300J, 12½°; others, 10

FUEL PUMP
Carter model M-2769S
Pressure: 3½-5 lb. at idle rpm
Volume: 1 quart per minute at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
2-bbl. BBD-3244S	1	index	index
2-bbl. BBD-3245S	1	index	index
2-bbl. BBD-3476S	¾	2 rich	2 rich
4-bbl. AFB-3251S	1-2	2 rich	2 rich
4-bbl. AFB-3256S	1-2	2 rich	2 rich
4-bbl. AFB-3259S	1-2	1 rich	1 rich
(2) 4-bbl. AFB-3505S	1-2	manual	manual
STROMBERG			
2-bbl. WWC3-201	1-1½	1 rich	1 rich

ENGINE IDLE SPEED
Manual Trans. 500 rpm* with headlights on high beam
Auto. Trans. 500 rpm* in NEUTRAL with headlights on high beam
Air Cond. 500 rpm* in DRIVE with unit turned ON with headlights on high beam
* 300H, 650 rpm; 300J, 700-750 rpm
Air Cond. 750 rpm in DRIVE with unit turned ON

VALVE CLEARANCES
(engine hot and running)
300H: Intake .015"; exhaust .024"
(engine cold, not running)
300J: Intake .017"; exhaust .028"
Others: Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, then need for service is indicated
Two adjustment cams are provided on each support plate. To tighten, turn both front brake cams and rear brake front cam in direction of forward wheel rotation. Tighten rear brake rear cam in the reverse direction
1962: Adjust the brakes as follows:
1. Turn one adjustment cam until heavy drag is felt when wheel is turned
2. Slowly back off cam until no drag is felt
3. Repeat steps 1 and 2 for other cam
4. Repeat steps 1, 2 and 3 for each brake

1963: Brakes are self-adjusting
Bleeding sequence: RR, LR, RF, LF When bleeding front brakes, bleed lower cylinder first

CHEVROLET CHEVELLE SIX, V-8—1964-'66

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars.

BATTERY

	AABM Group No.	Amp. Hrs.
6-cyl. and V-8 283 eng.	22F	44
Air conditioning	24	53
V-8 327, 396 engs.	24	61
	24T	70

1966 models have bottom holddown

COMPRESSION PRESSURE

(at cranking speed with throttle open)

	psi
6-cyl.	130
283 engine	150
327 engine, Carter or Rochester carb.	160
327 engine, Holley carb.	150
396 engine	160

Maximum variation between cylinders, 20 psi

SPARK PLUGS

AC: 6-cyl., 46N, continuous heavy-duty operation, 44N; V-8 283 eng., 45; 327 eng., 44; 396 eng., 43N
Gap: .035" Torque: 25 ft. lb.

IGNITION POINTS

Delco
Gap: .016" used; .019" new
Dwell angle: 6-cyl., 31°-34°; V-8, 28°-32

CONDENSER

Delco
Capacity: .18-.23 mfd

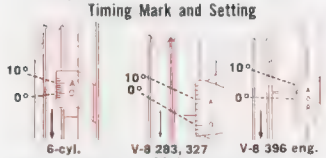
Cylinder Numbering Sequence

Firing Order: 6-cyl. 1, 5, 3, 6, 2, 4
V-8 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6-cyl.: 194 eng., 8°, 230 eng., 4°, A.I.R. and manual trans., 3°. V-8: 283 eng., 4°; 327 eng.: 1965 250-hp 4°, 300-, 350-hp 8°; 1966 275-hp 8°*, 350-hp 10°. 396 eng.: 325-, 360-hp 4°
(Each line equals 2°)
* With A.I.R. and Auto. Trans., 2° ATDC

FUEL PUMP

AC mechanical
Pressure: 6-cyl. 1964, 3½-4½ lb.; 1965, 3¼-4½ lb.; 1966, 3-4½ lb.; V-8 1964-65, 5¼-6½ lb.*; 1966, 5-6½ lb.; at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle to 1000 rpm
* 327 eng. Holley carb. 6-7¼ lb.

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
1-bbl. YF	1½	†	†
4-bbl. AFB	1½	1 lean	1 lean
4-bbl. AVS	1½	**	**
HOLLEY			
4-bbl. 4150 (1965)	1¾	3 lean	3 lean
4150, -60 (1966)	1½	**	**
ROCHESTER			
1-bbl. BV	1½	*	*
2-bbl. 2GV	1½	**	**
4-bbl. 4GC	1½	index	index
4-bbl. 4MV	1½	**	**

* California cars with A.I.R., hold choke valve fully closed, bend choke rod at offset to obtain slight clearance (.015" max.) between fast idle cam and boss on carburetor bowl
** ½-1 rod dia. above top of hole in choke lever
† One rod dia. above top of hole in choke lever

ENGINE IDLE SPEED

327 350-hp eng.: 750 rpm†, with A.I.R. 750 rpm
396 eng.: Man. Trans. 550 rpm†. Auto. Trans. 550 rpm*†; with A.I.R. 550 rpm†; in DRIVE
All other engines: Man. Trans. 500 rpm†; with A.I.R. 700 rpm. Auto. Trans. 500 rpm*†; with A.I.R. 600 rpm; in DRIVE
* Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
† Air conditioning, set to normal idle speed with unit turned ON and idle compensator, if so equipped, held closed

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required

Bleeding sequence: LR, RR, RF, LF

Power brake (engine stopped), power brake slave cylinder, power brake valve **LR, RR, RF, LF**

KEY

- Conoco Super Lube
- TA — Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months

CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

STEERING GEAR

Every 36,000 miles. Remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out of other hole. Replace screws

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain to level mark at operating temperature. 396 cu. in. engine, reservoir on fender apron. Check level. Maintain level to 1½" to 2" below top of reservoir

POWERGLIDE SHIFT LINKAGE

Every 6000 miles. Coat linkage

TRANSMISSION

3-Speed (2 pts.) 3-Speed H.D
4-Speed (2½ pts.)

TRANS. WITH OVERDRIVE (3 pts.)

Overdrive drain and fill thru transmission plugs

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

CAUTION: Fill slowly. Recheck level after short operation

POWERGLIDE (2 qts.)

Heavy-duty transmission with drain plug in converter (9 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

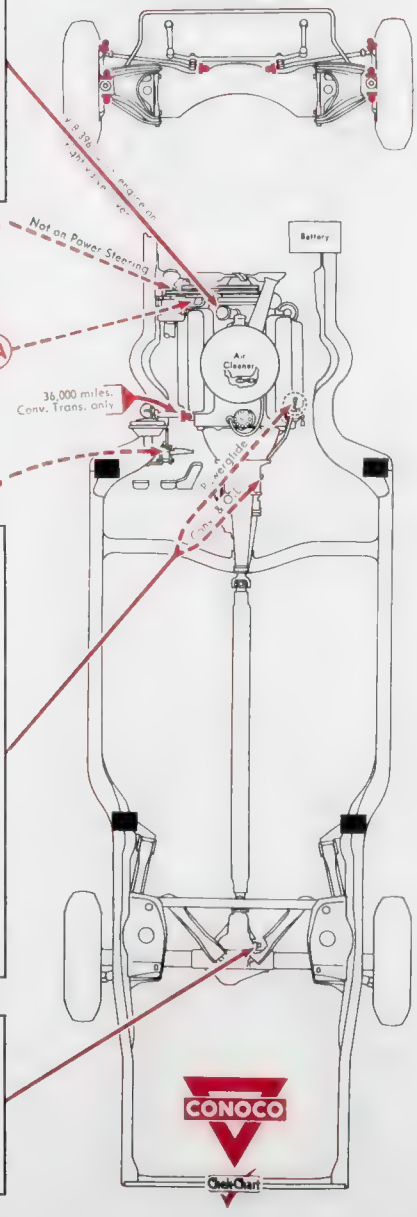
REAR AXLE

327, 396 cu. in. engs., Heavy-Duty axle (4 pts.)
Others (3½ pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80



COOLING SYSTEM: Six 10 qts.-12 qts. V-8 15 qts.-23 qts.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove [illegible] every 6000 miles, clean in kerosene [illegible] in CONOCO ALL-SEAS[illegible] OIL SAE No. 10W-30, re[illegible] reinstall.

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles

CRANKCASE VENTILATOR

Valve type: Install [illegible] miles: [illegible] required

FUEL FILTER

Replace element in bowl type [illegible] 12,000 miles. [illegible] fuel inlet only if [illegible]

OIL FILTER

[illegible] at least every 6000 [illegible] becomes dirty

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR

Refer servicing to Authorized Agency.

GAS TANK: 20 gals.

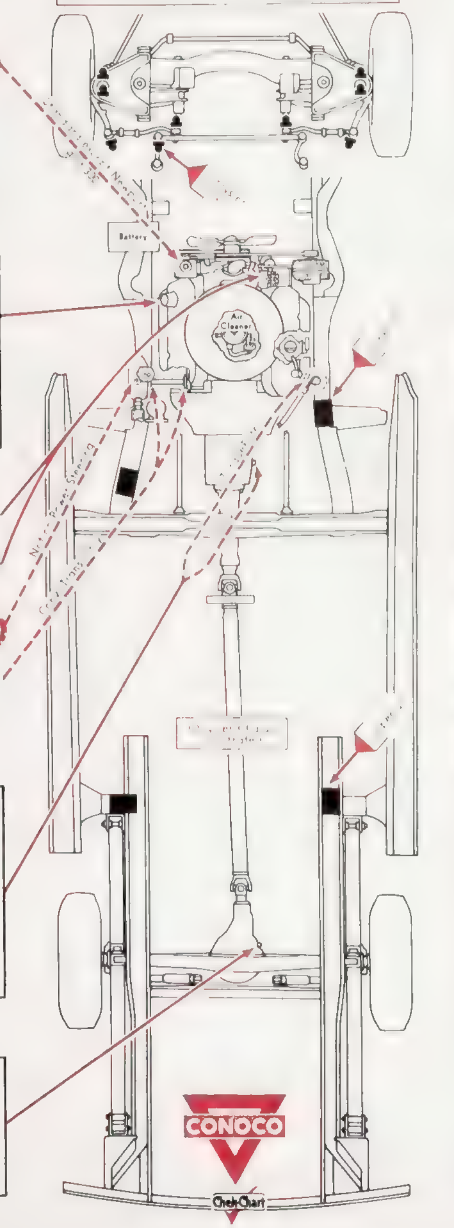
CHRYSLER, IMPERIAL 1966

KEY ➡

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1966 [illegible]
Th[illegible]

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 36,000 miles or 3 years. **CAUTION:** Apply sparingly. See General Instructions



POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

CRANKCASE
Chrysler (**4 qts.**) Imperial (**5 qts.**)

Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and reoil with crankcase grade

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 4000 miles. Under rotor—4 drops on wick

STEERING GEAR (90)
Every 4000 miles. Remove plug and fill

TORQUE SHAFT
Every 36,000 miles or 3 years. Disassemble clean and repack both ends

TRANSMISSION (6 pts.)
Conoco Automatic Transmission Fluid Type A

TORQUEFLITE TRANSMISSION (9 qts.)
Conoco Automatic Transmission Fluid Type A
See General Instructions

REAR AXLE (4 pts.)
(Also includes Sure-Grip axle)
Conoco Universal Gear Lubricant SAE No.

All temperatures	90

COOLING SYSTEM: Chrysler **16 qts.** Imperial **17 qts.** With heater, and/or with air conditioning or high-capacity system add **1 qt.**

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

CARBURETOR CHOKE SHAFT
Clean every 4000 miles. Remove air cleaner to service.

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate

UNIVERSAL JOINTS
Every 36,000 miles. See General Instructions

UNIVERSAL JOINT SPLINE
(Chrysler) Coat spline evenly with CONOCO SUPER LUBE M every 36,000 miles. (Imperial) Every 36,000 miles, repack spline, located front of center joint, half full with CONOCO SUPER LUBE M.

GAS TANK: 22-25 gals.

TUNE-UP DATA

See Service Instructions for Procedure

CAP is Cleaner Air Package for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
All	27	70

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)	min.	max.
383 2-bbl. engine	125	155*
383 4 bbl., 440 4 bbl engines	130	165**

Max. var. between cylinders *20; **25

SPARK PLUGS

Champion: 383 2-bbl. J-14Y; 383 4-bbl., 440 4-bbl. J-13Y*
MoPar: 383 2-bbl. P-3-6P; 383 4-bbl., 440 4-bbl. P-3-5P*
* If J-13Y or P-3-5P are not available, use Champion J-12Y
Gap: .035"
Torque: 30 ft. lb.

IGNITION POINTS

Chrysler
Gap: .014"-.019"
Dwell angle: 28°-32°

CONDENSER

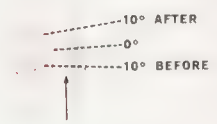
Chrysler
Capacity: .25-.285 mfd

Cylinder Numbering Sequence

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE See Page 43

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 12.5°*
* California car with CAP: 383 engs. Man. Trans. 5° ATDC, Auto. Trans. TDC; 440 engs. TDC

FUEL PUMP

Carter model M-3672S
Pressure: 3½-5 lb. at 500 rpm
Volume: 1 quart in 60 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL			
2-bbl. BBD	1*	2 rich	2 rich**
CARTER			
4-bbl. AFB	1-2	2 rich**	2 rich**
STROMBERG			
2-bbl. WWC3	1*	2 rich	2 rich**

* Auto. Trans. 1½
** California car with CAP, index

ENGINE IDLE SPEED

Manual Trans.: 500 rpm; CAP 650 rpm
Auto. Trans.: 500 rpm; CAP 600 rpm; in NEUTRAL
Air Cond.: Same rpm as listed with unit turned ON; CAP with unit turned OFF

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes, except—
With trailer-towing package, brakes must be adjusted manually. Adjust brakes as follows:

1. Back off parking brake cable adjustment until there is slack
2. Using suitable tool inserted into adjustment opening, turn star wheel adjuster until slight drag is felt when wheel is turned
3. Back off adjustment 10-12 notches or until wheel turns freely
4. Repeat procedure at each wheel
5. Readjust parking brake cable

Disc brakes optional. Replace pads when thickness reaches .030 inch
Bleeding sequence: RR, LR, RF, LF

CHRYSLER, IMPERIAL 1964-'65

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1964 Newport, 300	24H	59
	27H	70
1965 Imperial	27	70
All others	27H	70

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)	min.	max.
Newport, 300K with M.T.	125	155*
New Yorker, 300, 300K with A.T., 300L Imperial	130	165**

Max. var. between cylinders: *20 psi; ** 25 psi

SPARK PLUGS

1964: Champion, 300K with 390 hp. eng. XJ-10Y; 300K with 360 hp eng. J-10Y; Imperial J-14Y or Mopar P-3-6P; others J-12Y
1965: 413 eng. with Power Pack, Champion J-10Y or Mopar P-3-3P; Others, Champion J-14Y or Mopar P-3-6P
Gap: .035" Torque: 30 ft. lb

IGNITION POINTS

Chrysler, Prestolite
Gap: .014"-.019"
Dwell angle: Single points 28°-33°; each set of dual points 27°-32°, total dwell 34°-40°

CONDENSER

Chrysler, Prestolite
Capacity: .25-.285 mfd

Cylinder Numbering Sequence

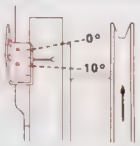
Prestolite dist. Chrysler dist.

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to adapter inserted in No. 1 distributor cap tower
   Note: Do not puncture spark plug cables
4. Disconnect vacuum line at distributor
5. Set idle speed to 475-500 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pulley align
7. Retighten clamp screw, recheck timing
8. Reconnect vac. line and reset to proper idle

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 1964 300K with 390 hp engine, 12½°; others, 10°. 1965 300L with 390 hp engine, New Yorker and Imperial, 12½°; others, 10

FUEL PUMP

Carter model M-3672S
Pressure: 3½-5 lb. at idle rpm
Volume: 1 quart per minute at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL 2-bbl. BBD	¾	2 rich	2 rich
CARTER 4-bbl. AFB	1-2	2 rich*	2 rich*
STROMBERG 2-bbl. WWC3	1½	1 rich	1 rich

* 1964, 300 Hi-Perf., index; 1965, 300 Hi-Perf., 383, 413 (3859S, 3860S) engines, index

ENGINE IDLE SPEED

Manual Trans. 500 rpm* with headlights on high beam
Auto. Trans. 500 rpm* in NEUTRAL with headlights on high beam
Air Cond. 500 rpm* in DRIVE with unit turned ON with headlights on high beam
* 300 Hi-Perf., 383, 413 (3859S, 3860S), 550 rpm

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required
Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1964-'65 Chrysler Corp. cars have a five-year or 50,000 mile factory warranty on power train components. The lubricants and service intervals on this chart completely satisfy warranty requirement

POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 32,000 miles. CAUTION: Apply sparingly. See General Instructions

CRANKCASE
'65 Chrysler (4 qts.) Others (5 qts.)
Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

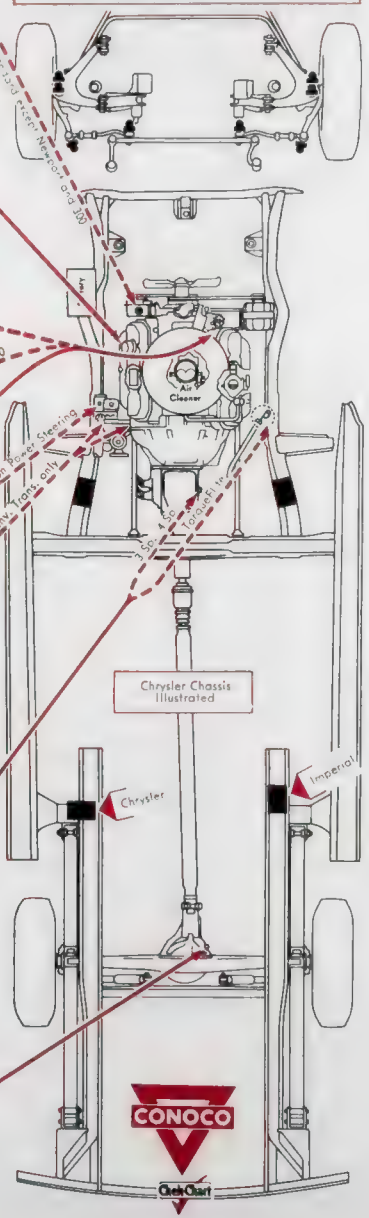
DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR GREASE CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 4000 miles. Under rotor—4 drops on wick

STEERING GEAR (90)
Every 4000 miles. Remove plug and fill

TORQUE SHAFT
Every 32,000 miles. Disassemble, clean and repack both ends



3-SPEED TRANS. (4½ pts.)
Conoco Automatic Transmission Fluid Type A

4-SPEED TRANS. (7 pts.)
Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

TORQUEFLITE TRANSMISSION (9 qts.)
Conoco Automatic Transmission Fluid Type A
See General Instructions

REAR AXLE (4 pts.)
(Also includes Sure-Grip axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures .. 90

COOLING SYSTEM: 16 qts. (with heater 17 qts.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CARBURETOR CHOKE SHAFT
Clean every 4000 miles. Remove air cleaner to service.

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions.

UNIVERSAL JOINT SPLINE
(Imperial) Every 32,000 miles, repack spline, located front of center joint, half full with CONOCO SUPER LUBE M. (1965 Chrysler TorqueFlite) Coat spline evenly with CONOCO SUPER LUBE M every 32,000 miles.

GAS TANK: 21-25 gals.

DODGE LANCER—1962; DART SIX—1963

KEY

Conoco Super Lube M	Conoco Steering Gear Grease (SG)
Conoco Automatic Transmission Fluid Type A (TA)	Conoco Super Motor Oil SAE No. 20-20W
Service From Under Hood	Positions For Frame Engaging Lift Adapters

1963 [illegible]
[illegible]

CRANKCASE (4 qts.)

Drain and refill: 2 months or 4000 miles
See Page 1 for exceptions

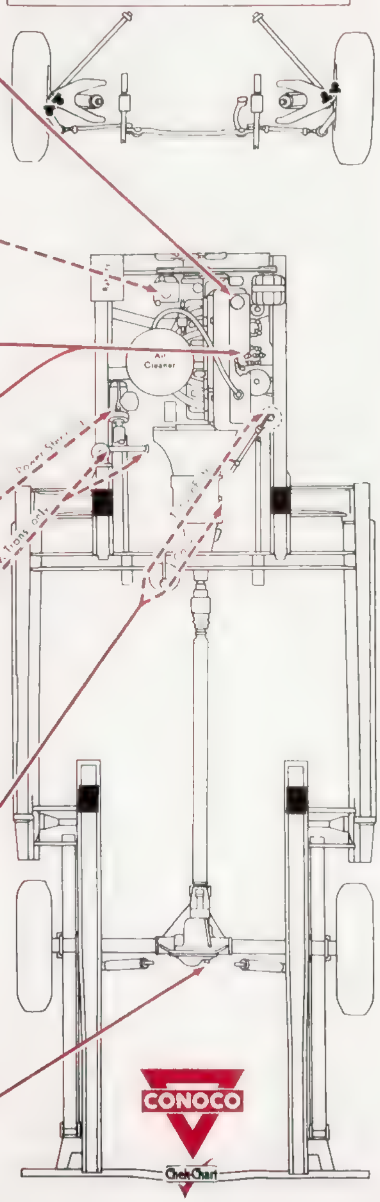
Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and reoil with crankcase grade

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension every 32,000 miles. **CAUTION:** Apply sparingly. See General Instructions

COOLING SYSTEM: Super 225 cu. in. engine **12 qts.**, others **11 qts.** (with heater add **1 qt.**)



POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)
Every 4000 miles. Remove plug and fill

TORQUE SHAFT
Every 32,000 miles. Disassemble, clean and repack both ends

TRANSMISSION (5 pts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '62 every 32,000 miles

TORQUEFLITE TRANSMISSION (7 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '62 every 32,000 miles. See General Instructions

REAR AXLE (2 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

Drain and refill: '62 every 32,000 miles

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 8000 miles.

CRANKCASE BREATHER
Every 8000 miles wash element in kerosene, dry and reoil with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

AUTOMATIC TRANSMISSION FILTER
Replace filter at time of transmission drain.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

SPRINGS
Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions

GAS TANK: '62, **14** gals., '63, **18** gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	20H	38
	24H	48

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)	min.	max.
All	110	140*

* Maximum variation between cylinders, 20 psi

SPARK PLUGS

Champion: 1962, N-12Y; 1963, N-14Y*
Gap: .035"
Torque: 30-32 ft. lb.
* 1963, gasket not required

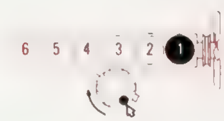
IGNITION POINTS

Chrysler
Gap: .017"-.023"
Dwell angle: 40°-45

CONDENSER

Chrysler
Capacity: .25-.285 mfd

Cylinder Numbering Sequence

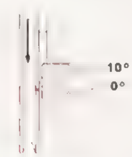


Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 550 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 2½

FUEL PUMP

Carter model M-2996S
Pressure: 3½-5 lb. at idle rpm
Volume: 1 quart per minute at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL			
1-bbl. BBS	1	2 rich* **	2 rich* **
HOLLEY			
1-bbl. R	1	index*†	index*†
STROMBERG			
1-bbl. WA	¾-1	—	2 rich*

* Choke should not be field calibrated. Replace unit if defective
** 1963, 4 rich
† 1963, 2 rich

ENGINE IDLE SPEED

Manual Trans. 550 rpm with headlights on high beam
Auto. Trans. 550 rpm in NEUTRAL with headlights on high beam
Air Cond. 550 rpm in NEUTRAL with unit turned ON and headlights on high beam

VALVE CLEARANCES

(engine hot and running)
Intake .010"; exhaust .020"

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated

1962, early 1963: Adjust the brakes as follows:

1. Using a suitable tool inserted into rear adjustment hole in backing plate, expand shoes until light drag is felt when rotating wheel
2. Back off adjustment 10-12 notches or until all drag is eliminated
3. Repeat steps 1 and 2 for each brake

Late 1963: Brakes are self-adjusting. Adjustment is not normally required

Bleeding sequence: RR, LR, RF, LF

DODGE SIX, DART—1962; 330, 440, POLARA—1963

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24H	48, 59

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)	min.	max.
All	110	140*

* Maximum variation between cylinders, 20 psi

SPARK PLUGS

Champion: 1962, N-12Y; 1963, N-14Y*
Gap: .035"
Torque: 30-32 ft. lb.
* 1963, gasket not required

IGNITION POINTS

Chrysler
Gap: .017"-.023"
Dwell angle: 40 -45

CONDENSER

Chrysler
Capacity: .25-.285 mfd

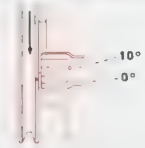
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 550 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 2½°

FUEL PUMP

Carter model M-2996S
Pressure: 3½-5 lb. at idle rpm
Volume: 1 quart per minute at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL 1-bbl. BBS	1	2 rich* **	2 rich* **
HOLLEY 1 bbl. R	1	index*†	index*†
STROMBERG 1-bbl. WA	¾-1	—	2 rich*

* Choke should not be field calibrated. Replace unit if defective
** 1963, 4 rich
† 1963, 2 rich

ENGINE IDLE SPEED

Manual Trans. 550 rpm with headlights on high beam
Auto. Trans. 550 rpm in NEUTRAL with headlights on high beam
Air Cond. 550 rpm in NEUTRAL with unit turned ON and headlights on high beam

VALVE CLEARANCES

(engine hot and running)
Intake .010"; exhaust .020"

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1963 Chrysler Corp. cars have a five-year or 50,000 mile factory warranty on power train compo[illegible]. The lubricants and service intervals on this chart completely satisfy warranty requirement

CRANKCASE (4 qts.)
Drain and refill: 2 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension every 32,000 miles. **CAUTION:** Apply sparingly. See General Instructions

COOLING SYSTEM: 12 qts. (with heater 13 qts.)

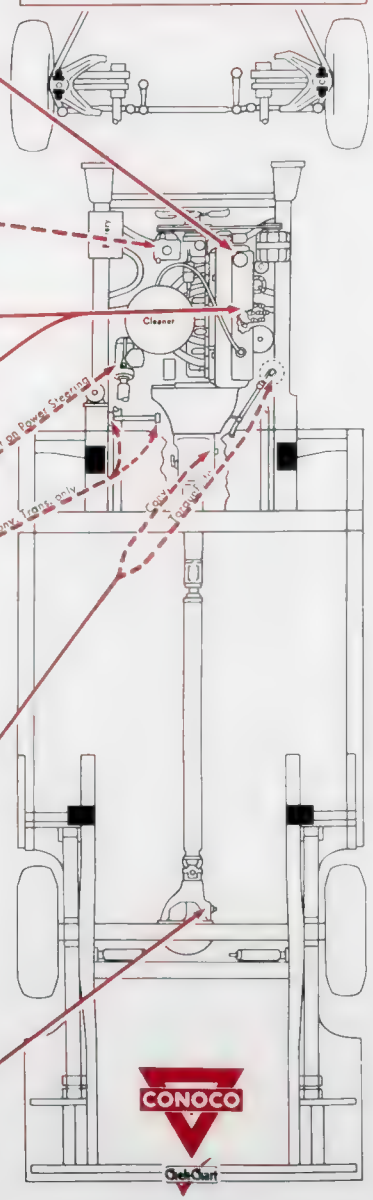
POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)
Every 4000 miles. Remove plug and fill

TORQUE SHAFT
Every 32,000 miles. Disassemble, clean and repack both ends



TRANSMISSION (5 pts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: '62 every 32,000 miles

TORQUEFLITE TRANSMISSION
(7 qts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: '62 every 32,000 miles. See General Instructions

REAR AXLE (4 pts.)
(Also includes Sure-Grip axle)
Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Drain and refill: '62 every 32,000 miles

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 8000 miles

CRANKCASE BREATHER
Every 8000 miles wash element in kerosene, dry and recoil with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirt.

AUTOMATIC TRANSMISSION FILTER
Replace filter at time of transmission drain

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions.

GAS TANK: 20 gals., Station Wagon 21½ gals.

DODGE SIX, DART SIX—1964-'65

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1964-'65 Chrysler Corp[illegible] The lubricants and [illegible] intervals on this chart completely satisfy w[illegible]

CRANKCASE (4 qts.)

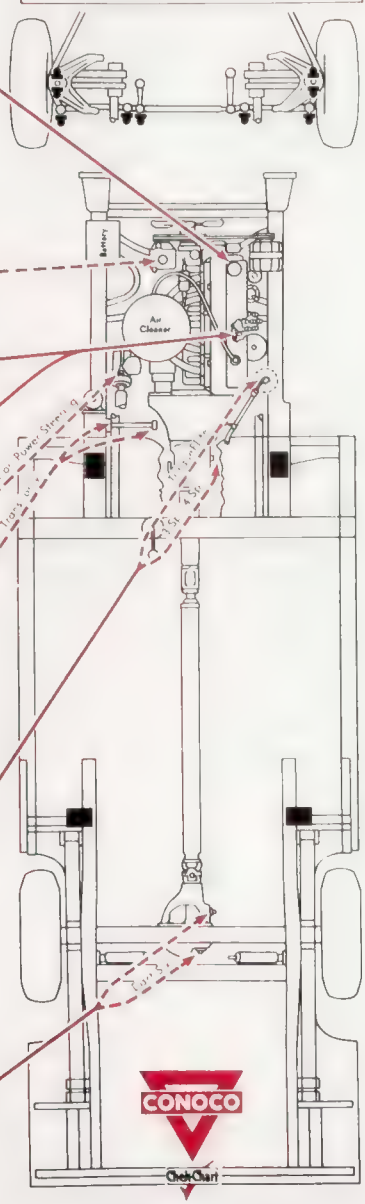
Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 32,000 miles. CAUTION: Apply sparingly. See General Instructions



POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 4000 miles. Under rotor—4 drops on wick

STEERING GEAR (90)
Every 4000 miles. Remove plug and fill

TORQUE SHAFT
Every 32,000 miles. Disassemble, clean and repack both ends

3-SPEED TRANS. (5½ pts.)

Conoco Automatic Transmission Fluid Type A

4-SPEED TRANS. (6½ pts.)

Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

TORQUEFLITE TRANSMISSION (8 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

Six (4 pts.) Dart Six (2 pts.)

(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

COOLING SYSTEM: Six, Dart Six Super 225 cu. in. engine **12 qts.** Other Dart Six **11 qts.** (with heater add **1 qt.**)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

AIR CLEANER—OIL BATH TYPE
Clean base every 4000 miles. Fill to level mark with 1 pt. CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

CARBURETOR CHOKE SHAFT
Clean every 4000 miles. Remove air cleaner to service.

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions.

GAS TANK: Six **19 gals.** Station Wagon **21 gals.** Dart Six **18 gals.**

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
Dodge	24H	48, 70
Dart 170 engine	20H	38, 48
225 engine	24H	48, 70

COMPRESSION PRESSURE
(psi at cranking speed, throttle open)

	min.	max.
All	110	140*

* Maximum variation between cylinders, 20 psi

SPARK PLUGS
Champion N-14Y; MoPar P-6-6P
Gap: .035"
Torque: 30-32 ft. lb.

IGNITION POINTS
Chrysler
Gap: .017"-.023"
Dwell angle: 40 -50

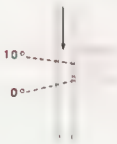
CONDENSER
Chrysler
Capacity: .25- 285 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 550 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 2½

FUEL PUMP
Carter model MS-3674S
Pressure: 3½-5 lb. at idle rpm
Volume: 1 quart per minute or less at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL			
1-bbl. BBS	1	2 rich*	2 rich*
HOLLEY			
1-bbl. R. 1920	1	2 rich*	2 rich*

* Choke should not be field calibrated. Replace unit if defective

ENGINE IDLE SPEED
Manual Trans. 550 rpm with headlights on high beam
Auto. Trans. 550 rpm in NEUTRAL with headlights on high beam
Air Cond. 550 rpm in NEUTRAL with unit turned ON and headlights on high beam

VALVE CLEARANCES
(engine hot and running)
Intake .010": exhaust .020

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF

DODGE V-8—1962-'63

TUNE-UP DATA

See Service Instructions for Procedure
(Following data does not include racing engines)

BATTERY

	AABM Group No.	Amp. Hrs.
318 engine	24H	48
361, 383 engines	24H	59

COMPRESSION PRESSURE
(psi at cranking speed, throttle open)

	min.	max.
318 eng.	120	150*
361 eng.	125	155*
383 eng. Automatic Trans.	130	165**
383 eng. Manual Trans.	150	180**

* Maximum variation between cylinders, 20 psi
** Maximum variation between cylinders, 25 psi

SPARK PLUGS
Champion: 383 eng. with 4-bbl. carb., J-9Y; others, J-12Y
Gap: .035"
Torque: 30-32 ft. lb.

IGNITION POINTS
Autolite, Chrysler, Prestolite
Gap: Autolite, Chrysler, .014"-.019"; Prestolite, .015"-.018"
Dwell angle: Single points, Autolite, Chrysler, 28 - 33 ; Prestolite, 26 -32 ; Dual points, each set, 27 -32 , total dwell, 54 -40

CONDENSER
Autolite, Chrysler, Prestolite
Capacity: .25-.285 mfd

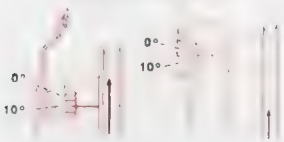
Cylinder Numbering Sequence

318 eng. 361, 383 engs.

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 475-500 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



318 eng. 361, 383 engs.

Timing Setting (Before Top Dead Center):
1963, 361, 383 engs. 10°; others, Manual Trans. 5°, Auto. Trans. 10°

FUEL PUMP
Carter model: 318 eng., M-2608S; with Air Cond., M-2611S; 361, 383 engs., M-2769S
Pressure: M-2769S, 3½-5 lb.; others, 5-7 lb.; at idle rpm
Volume: 1 quart per minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL 2-bbl. BBD	1	index*	index*
CARTER 4-bbl. AFB	1½	2 rich*	2 rich* **
STROMBERG 2-bbl. WWC3	1¼	index*	index*

* Choke should not be field calibrated. Replace unit if defective
** 1963, index

ENGINE IDLE SPEED
Manual Trans. 500 rpm, headlights on high beam
Auto Trans. 500 rpm, in NEUTRAL with headlights on high beam
Air Cond. 500 rpm, in NEUTRAL with unit turned ON and headlights on high beam

VALVE CLEARANCES
(engine hot and running)
318 eng.: Intake .013"; exhaust .021"
361, 383 engs.: Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required
Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- SG — Conoco Steering Gear Grease
- TA — Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

1963 Chrysler Corp. cars have a five-year or 50,000 mile factory warranty on power train components. The lubricants and service intervals on this chart completely satisfy warranty requirement

POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension every 32,000 miles. **CAUTION:** Apply sparingly. See General Instructions

CRANKCASE
880 (5 qts.) Others (4 qts.)
Drain and refill: 2 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

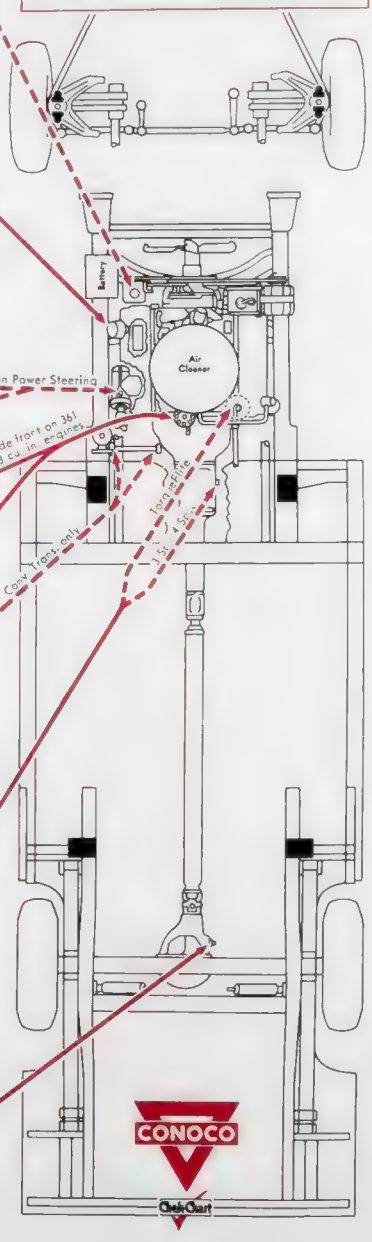
Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR
880 (90) Not on Power Steering
Others (SG)
Every 4000 miles. Remove plug and fill

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

TORQUE SHAFT
Every 32,000 miles. Disassemble, clean and repack both ends



3-SPEED TRANSMISSION
880 (3½ pts.) Others (5 pts.)
Conoco Automatic Transmission Fluid Type A

4-SPEED TRANS. (3 pts.)
Conoco Universal Gear Lubricant SAE No. 80
(Below 32°F.—Conoco Automatic Transmission Fluid Type A)
Drain and refill: '62 every 32,000 miles

TORQUEFLITE TRANSMISSION
(9 qts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: '62 every 32,000 miles. See General Instructions

REAR AXLE (4 pts.)
(Also includes Sure-Grip axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90
Drain and refill: '62 every 32,000 miles

COOLING SYSTEM: 361 and 383 cu. in. engines **16 qts.**, others, **20 qts.** (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12 ...

CRANKCASE VENTILATOR VALVE
When equipped with ...sed crankcase ventilating system, disassemble and clean every 8000 miles

CRANKCASE BREATHER
Every 8000 miles wash element in kerosene, dry and recoil with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30

FUEL FILTER
Replace fuel filter every 12,000 m...

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER
Replace filter at time of transmission drain

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions.

GAS TANK: 880: **23 gals.**, Station Wagon **21 gals.** Others: **20 gals.**, Station Wagon **21½ gals.**

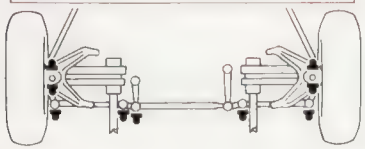
DODGE SIX, DART SIX—1966

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1966 Chrysler [illegible]
The lubricant [illegible]

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 36,000 miles or 3 years. **CAUTION:** Apply sparingly. See General Instructions



CRANKCASE (4 qts.)

Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

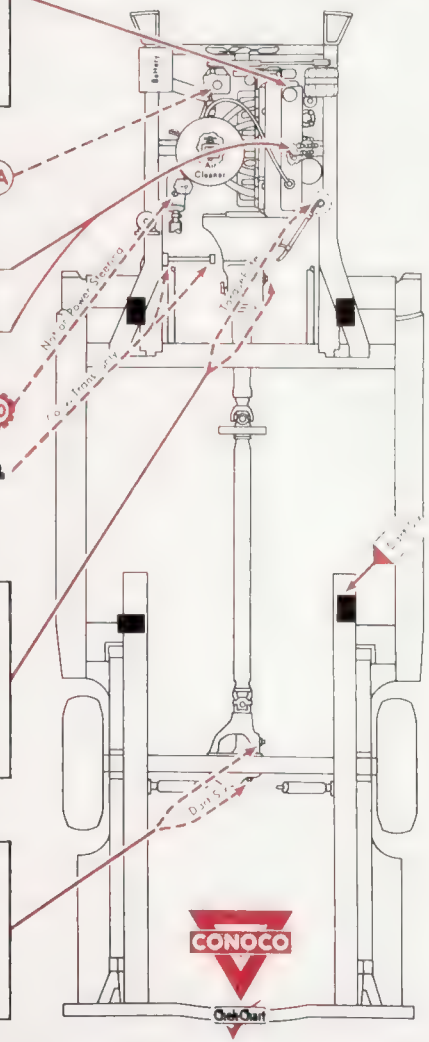
POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 4000 miles. Under rotor—4 drops on wick

STEERING GEAR (90)
Every 4000 miles. Remove plug and fill

TORQUE SHAFT
Every 36,000 miles or 3 years. Disassemble, clean and repack both ends



TRANSMISSION (6½ pts.)

Conoco Automatic Transmission Fluid Type A

TORQUEFLITE TRANSMISSION (8 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

Six (2 pts.) except Station Wagon (4 pts.)
Dart Six (2 pts.)

(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

COOLING SYSTEM: Six, Dart Six Super 225 cu. in. engine **12 qts.** Other Dart Six **11 qts.** With heater, and/or with air conditioning or high-capacity system add **1 qt.**

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 4000 miles. Fill to level mark with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

CARBURETOR CHOKE SHAFT
Clean every 4000 miles. Remove air cleaner to service.

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 36,000 miles. See General Instructions

UNIVERSAL JOINT SPLINE
Coat spline evenly with CONOCO SUPER LUBE M every 36,000 miles.

GAS TANK: Six **19 gals.** Dart Six **18 gals.**

TUNE-UP DATA

See Service Instructions for Procedure

CAP is Cleaner Air Package for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
170 engine	20H	38
	24H	48, 70
225 engine	24H	48
	24H	70

COMPRESSION PRESSURE
(psi at cranking speed, throttle open)

	min.	max.
All	110	140*

* Maximum variation between cylinders, 20 psi

SPARK PLUGS
Champion N-14Y or MoPar P-6-6P
Gap: .035"
Torque 30 ft. lb

IGNITION POINTS
Chrysler
Gap: .017"-.023"
Dwell angle: 40 -45

CONDENSER
Chrysler
Capacity: .25-.285 mfd

Cylinder Numbering Sequence

Firing Order: **1, 5, 3, 6, 2, 4**

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
170 engine 5 °
225 engine 2.5 °
* California car with CAP, 5 After Top Dead Center

FUEL PUMP
Carter model MS 3674S
Pressure: 3½-5 lb. at 500 rpm
Volume: 1 quart per minute or less at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL 1-bbl. BBS	1-2	2 rich	2 rich
HOLLEY 1-bbl. R, 1920	2	2 rich	2 rich

ENGINE IDLE SPEED
Manual Trans.: 550 rpm; CAP, 170 eng. 700 rpm, 225 eng. 650 rpm; headlights ON high beam
Auto. Trans.: 550 rpm; CAP, 650 rpm; in NEUTRAL; headlights ON high beam
Air Cond. Same rpm as listed with unit turned ON; CAP with unit turned OFF; headlights ON high beam

VALVE CLEARANCES
(engine hot and running)
Intake .010"; exhaust .020"

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required
Disc brakes optional. Replace pads when thickness reaches .030 inch
Bleeding sequence: RR, LR, RF, LF

DODGE V-8, DART V-8—1964-'65

TUNE-UP DATA

See Service Instructions for Procedure

(Following data does not include racing-type engs.)

BATTERY

	AABM Group No.	Amp. Hrs.
273, 318 engines	24H	48
361 engine	24H	59
	27H	70
383, 413, 426 engines	27H	70

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)	min.	max.
273 engine; 318 engine 1964 model	120	150*
318 engine, 1965 model	125	155**
361 engine	125	155***
383 eng.; ex. 1965 2-bbl., 273 4-bbl.	130	165**
1965 2-bbl.	125	155*
413, 426 engines	130	165**

Maximum variation between cylinders
*20 psi; **25 psi; ***1964, 20 psi, 1965, 25 psi

SPARK PLUGS

1964: Champion: 318, 361, 383 with 2-bbl. carb. J-12Y; 383 with 4-bbl. carb. 413, 426, J-10Y
1964-65: 273 eng., Champion N-14Y or MoPar P-6-6P; 1965: 318, 361, 383 with 2-bbl. carb., 413, Champion J-14Y or MoPar P-3-6P; 383 with 4-bbl. carb., 426, Champion J-10Y or MoPar P-3-3P
Gap: .035" Torque: 30-32 ft. lb.

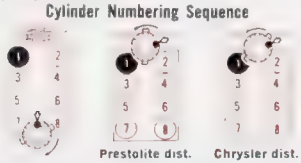
IGNITION POINTS

Chrysler, Prestolite Gap: .014"-.019"
Dwell angle: Single points 28 -33°*
Dual points: 1964: each set 27 -32 ; total dwell 34 -40
1965: each set 27°-31°; total dwell 36 -40
* 1965: 361 and 383 engs. with 2-bbl. carb. 28 -32

CONDENSER

Chrysler, Prestolite
Capacity: .25-.285 mfd

Cylinder Numbering Sequence



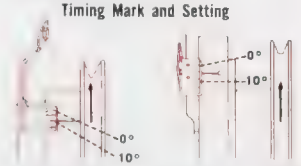
Prestolite dist. — 273, 318 engs.
Chrysler dist. — 361, 383, 413, 426 engs.

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 475-500 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



273, 318 engs. — 361, 383, 413, 426 engs.

Timing Setting (Before Top Dead Center):
273 and 318 engs. with Manual Trans. 5°, Auto. Trans. 10°; 413 eng. 12½°; others 10°

FUEL PUMP

Carter model: 273, 318 engs. MS-3673S; 361, 383, 413, 426 engs. MS-3672S
Pressure: MS-3673S, 5-7 lb.; MS-3672S, 3½-5 lb.; at idle rpm
Volume: 1 quart per minute or less at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL 2-bbl. BBD	1	index**	index**
CARTER 4-bbl. AFB	1-2	index*†	index*†
STROMBERG 2-bbl. WW3 1964-65	1¼	index*	index*
2-bbl WWC3 1965	1½	1 rich*	1 rich*

* Choke setting should not be field calibrated. Replace unit if defective
** 1965, 361, 383 engines, 2 rich
† 1965: 273, 383 and 413 engine with Auto. Trans., 2 rich

ENGINE IDLE SPEED

Manual Trans. 500 rpm*, headlights on high beam
Auto. Trans. 500 rpm*, in NEUTRAL with headlights on high beam
Air Cond. 500 rpm*, in NEUTRAL with unit turned ON and headlights on high beam
* 426 engine 550 rpm

VALVE CLEARANCES

(engine hot and running)
273, 318 engs.: Intake .013"; exhaust; .021"
361, 383, 413, 426 engs.: Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- TA — Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- 90 — Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1964-'65 Chrysler Corp. cars have a five-year or 50,000 mile factory warranty on power train [illegible]. The lubricants and service intervals on this chart completely satisfy warranty requirement

POWER STEERING RESERVOIR (TA)

Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 32,000 miles. CAUTION: Apply sparingly. See General Instructions

CRANKCASE

'64 880, 426 cu. in. engines (5 qts.)
Others (4 qts.)

Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (90)

Every 4000 miles. Remove plug and fill

DISTRIBUTOR OIL CUP

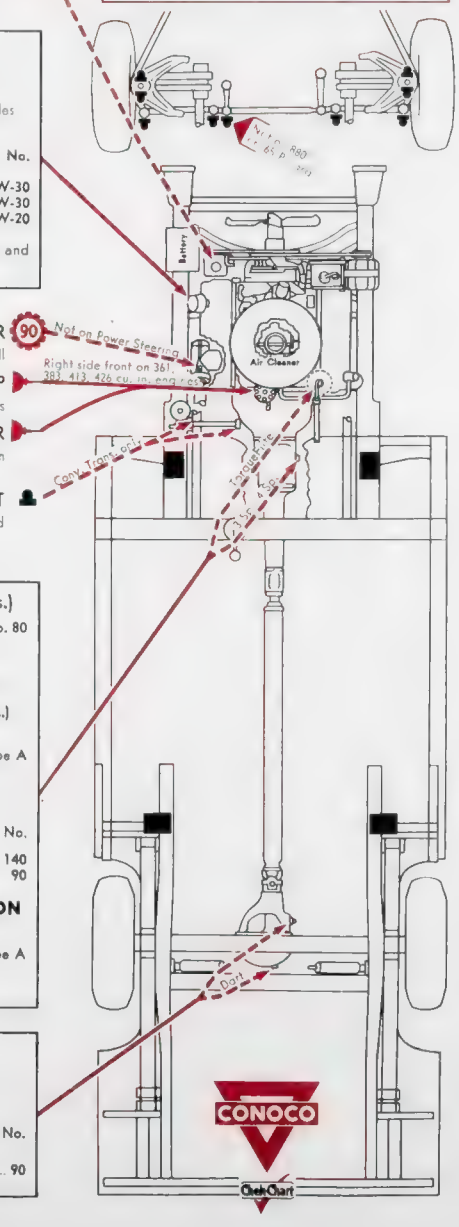
Every 4000 miles

DISTRIBUTOR CAM CENTER

Every 4000 miles. Under rotor—4 drops on wick

TORQUE SHAFT

Every 32,000 miles. Disassemble, clean and repack both ends



3-SPEED H.D. TRANS. (3 pts.)

Conoco Universal Gear Lubricant SAE No. 80

(Below +32°F.—Conoco Automatic Transmission Fluid Type A)

3-SPEED TRANSMISSION

'65 Polara, 880 (4½ pts.) '64 Dart (5 pts.)
'65 Dart (4½ pts.) Others (4 pts.)

Conoco Automatic Transmission Fluid Type A

4-SPEED TRANSMISSION

V-8 (7 pts.) Dart (6½ pts.)

Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

TORQUEFLITE TRANSMISSION

V-8 (9 qts.) Dart (8 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

V-8 (4 pts.) Dart (2 pts.)

(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

COOLING SYSTEM: 318 cu. in. engine 20 qts. 273 cu. in. engine, '65 Dart 17 qts. Others 16 qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

AIR CLEANER—OIL BATH TYPE
Clean base every 4000 miles. Fill to level mark with 1 pt. CONOCO ALL SEASON SUPER MOTOR OIL SAE No. 10W-30

CARBURETOR CHOKE SHAFT
Clean every 4000 miles [illegible] to service.

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions

UNIVERSAL JOINT SPLINE
(1965 V-8 TorqueFlite) Coat spline evenly with CONOCO SUPER LUBE M every 32,000 miles.

GAS TANK: 18-25 gals.

FORD SIX—1961 EXCEPT FALCON; 1962-'64 GALAXIE

KEY

- Conoco Super Lube M
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

CRANKCASE (4 qts.)

Drain and refill: '63-'64—6000 miles or 6 mos.
'62—6000 miles
'61—4000 miles

See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)

Every 6000 miles. Check level. Maintain level to ¼" from top of reservoir

CAUTION: '63-'64 filter element in reservoir, do not damage

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION

'61-'62 (3 pts.) '63-'64 (3½ pts.)

TRANS. WITH OVERDRIVE

'61-'62 (3 pts.) '63-'64 (3¾ pts.)

Individual drain plugs, fill through trans. plug

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

CAUTION: Fill slowly. Recheck level after short operation

FORDOMATIC DRIVE (9 qts.) CRUISE-O-MATIC C4

(8½ qts. dry capacity. Fill to full mark)

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

'61-'62 every 30,000 miles; '63-'64, 36,000 miles. Remove and replace plug
Special adapter required

REAR AXLE

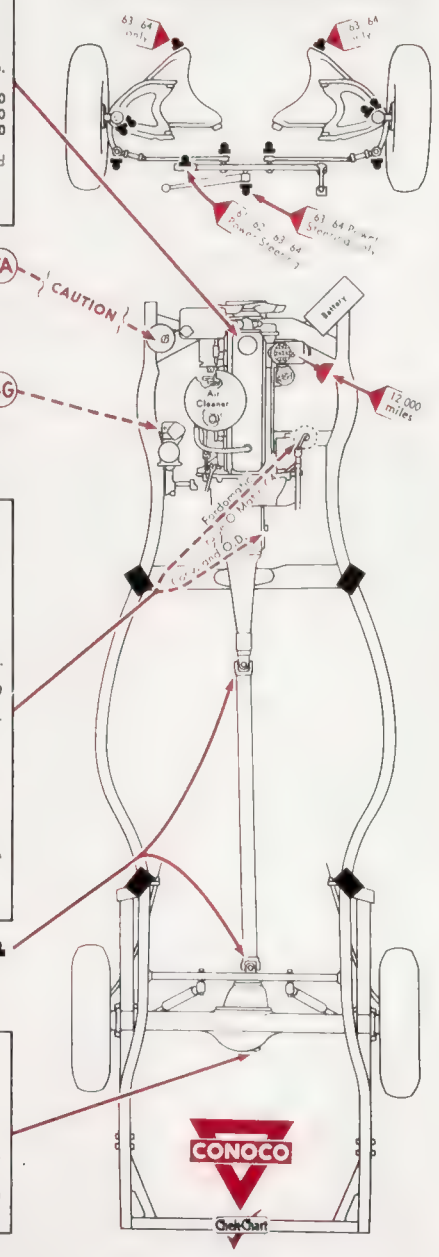
'61-'62 (4½ pts.) '63-'64 (5 pts.)

(Also includes Equa-Lock axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Repack front suspension and steering linkage: '61-'62, every 30,000 miles; '63-'64, 36,000 miles. CAUTION: Apply sparingly. See General Instructions



COOLING SYSTEM: 15 qts. (with heater 16 qts.)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Replace polyurethane element every 12,000 miles.

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE

When equipped, all valves except jiggle-pin type, disassemble and clean valve and all parts every 6000 miles. Jiggle-pin type, install new valve every 6000 miles and clean all other parts.

FUEL FILTER

Replace fuel filter every 12,000 miles.

OIL FILTER

Replace oil filter element at least every 4000 miles ('61); 6000 miles ('62-'64) or more often if oil becomes dirty

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions

AIR CONDITIONING UNIT
HYDRO-LECTRIC MECHANISM
POWER BRAKES

Refer servicing to Authorized Agency.

SPRINGS

Equipped with friction inserts, do not lubricate.

SHOCK ABSORBERS

Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS

Sealed type bearings.

UNIVERSAL JOINT SPLINE

(1961 Fordomatic) Clean, brush approx. 1 oz. CONOCO SUPER LUBE M evenly on splines every 30,000 miles.

GAS TANK: '61-'63, 20 gals., Station Wagon 21 gals. '64, 19½ gals., Station Wagon 20½ gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All ex. Auto. Trans. & A/C	29NF	55
All with Auto. Trans. & A/C	29NF	65
	27F	70

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
All	130-170

Max variation: 1961-63, 10 psi; 1964, 20 psi

SPARK PLUGS
Autolite: BTF6 except 1964 with economy carburetor, BF82
Gap: .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: New points .025" or 40° dwell
Used points set by dwell only to 40°
Dwell angle: 37°-42°

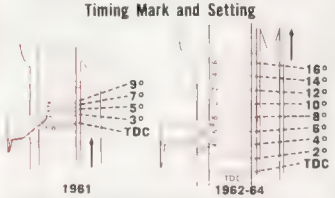
CONDENSER
FoMoCo
Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
1961-63:
Manual Trans. 6° (Allowable range, 2°-11°)
Auto. Trans. 12° (Allowable range, 2°-17°)
1964
Manual Trans. 4°*
Auto. Trans. 10°*
* For optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. Do not retard initial advance beyond 2° BTDC

FUEL PUMP
AC model: 5594872; with electric windshield wipers, 5594874
Pressure: 3½-5½ lb. at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
FORD	
1-bbl.	1-1½
HOLLEY	
1-bbl.	1-1½

ENGINE IDLE SPEED
Manual Trans.: 1961-63, 500-525 rpm
1964, 525-550 rpm
Auto. Trans.: 1961, 475-500 rpm in DRIVE
1962-63, 450-475 rpm in DRIVE
1964, 525-550 rpm in DRIVE
With air conditioning, same rpm as listed but with unit turned ON and in operation for 20 minutes

VALVE CLEARANCES
(engine hot and running)
Early 1961: Intake .019"; exhaust .019"
Late 1961, 1962-64 models have mechanical automatic valve adjusters. Periodic adjustment not required

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, proceed as follows:
1. Turn star wheel adjuster until shoes contact drum lightly
2. Remove drums and mark tooth on star wheel contacted by adjusting lever
3. Hold adjusting lever away from star wheel and back off adjustment ¾ turn with finger pressure only. If adjustment screw does not turn easily, remove and lubricate
4. Reinstall drums, wheels, and backing plate adjusting hole cover
5. Operate car in reverse and apply brakes several times to bring shoes into proper adjustment

Bleeding sequence: RR, LR, RF, LF

DODGE V-8, DART V-8—1966

TUNE-UP DATA

See Service Instructions for Procedure

CAP is Cleaner Air Package for California cars (Following data does not include racing-type engs.)

BATTERY

	AABM Group No.	Amp. Hrs.
273, 318 engines	24H	48
361 engine	24H	59
	27H	70
383, 426, 440 engines	27H	70

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)

	min.	max.
273 2-bbl. carb. engine	120	150*
273 4-bbl. carb. engine	150	180**
318 engine	110	140**
361, 383 2-bbl. engines	125	155*
383 4-bbl., 426, 440 engines	130	165**

* Maximum variation between cylinders, 20 psi
** Maximum variation between cylinders, 25 psi

SPARK PLUGS

273 2-bbl. Champion N-14Y or MoPar P-6-6P, 273 4-bbl. Champion N-9Y or MoPar P-6-2P
318, 361, 383 2-bbl. Champion J-14Y or MoPar P-3-6P
383 4-bbl., 426, 440 Champion J-13Y or MoPar P-3-5P*
* If J-13Y or P-3-5P are not available, use Champion J-12Y
Gap: .035" Torque: 30 ft. lb.

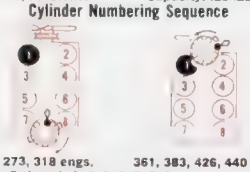
IGNITION POINTS

Chrysler, Prestolite Gap: .014"-.019"
Dwell angle: 28°-32°; dual points, each set 27°-31°, total dwell 36°-40°

CONDENSER

Chrysler, Prestolite Capacity: .25-.285 mfd

Cylinder Numbering Sequence



273, 318 engs. 361, 383, 426, 440 engs.

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE See Page 49

Timing Mark and Setting

273, 318 engs. 361, 383, 426, 440 engs.

Timing Setting (Before Top Dead Center):
273, 318 2-bbl. Manual Trans. 5°*; Auto. Trans. 10°*; 4-bbl. 10°*; 361, 383, 426, 440 engs. 12.5°*
* California car with CAP:
273, 318 engs., 5° After Top Dead Center
361, 383 engs. Manual Trans. 5° After Top Dead Center; Auto. Trans. TDC. 426, 440 engs. TDC

FUEL PUMP

Carter model: 273, MS-3962; 318 MS-3673S; 361, 383, 426, 440, MS-3672S
Pressure: MS-3692, MS-3673S, 5-7 lb.; MS-3672S, 3½-5 lb.; at 500 rpm
Volume: 1 quart per minute or less at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL			
2-bbl. BBD	1*	2 rich**	2 rich**
CARTER			
4-bbl. AFB	1-2	2 rich**	2 rich**
STROMBERG			
2-bbl. WW3	1¼ ●	2 rich**	2 rich**
2-bbl. WWC3	1½	—	2 rich**

* California car with CAP, 273 eng., 2 turns
** California car with CAP, Index (Except 361 eng. M.T. & A.T.; 383 eng. M.T.; with BBD 2-bbl., 2 rich)
● California car with CAP, ½ turn

ENGINE IDLE SPEED

Manual Trans. 2-bbl. 500 rpm; 4-bbl. 600 rpm; CAP 273 eng. 700 rpm, others 650 rpm
Auto. Trans. 500 rpm; CAP 273 eng. 650 rpm, others 600 rpm; in NEUTRAL
Air Cond. Same rpm as listed with unit turned ON; CAP with unit turned OFF

VALVE CLEARANCES

(engine hot and running)
273, 318 engs.: Intake .013"; exhaust .021"
361, 383, 426, 440 engines: Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes, except—
With trailer-towing package, brakes must be adjusted manually. Adjust brakes as follows:

1. Back off parking brake cable adjustment until there is slack
2. Using suitable tool inserted into adjustment opening, turn star wheel adjuster until slight drag is felt when wheel is turned
3. Back off adjustment 10-12 notches or until wheel turns freely
4. Repeat procedure at each wheel
5. Readjust parking brake cable

Disc brakes optional. Replace pads when thickness reaches .030 inch

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1966 Chrysler Corp. cars have a five-year or 50,000 mile factory warranty on power train con[illegible]
The lubricants and service intervals on this chart completely satisfy warranty requirements

POWER STEERING RESERVOIR (TA)

Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 36,000 miles or 3 years. **CAUTION:** Apply sparingly. See General Instructions

CRANKCASE

426 cu. in. engine (5 qts.)
Others (4 qts.)

Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (90) Not on Power Steering

Every 4000 miles. Remove plug and fill

DISTRIBUTOR OIL CUP Right side front on 361, 383, 426, 440 cu. in. engines

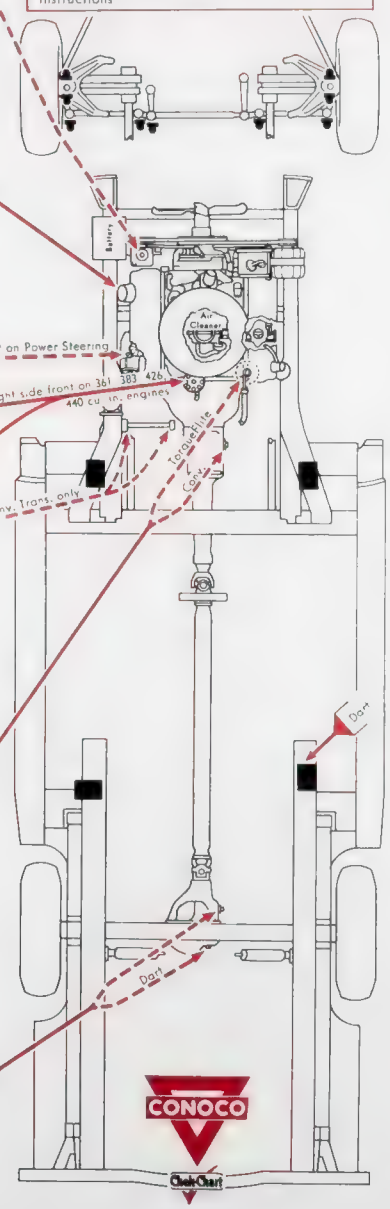
Every 4000 miles

DISTRIBUTOR CAM CENTER

Every 4000 miles. Under rotor—4 drops on wick

TORQUE SHAFT

Every 36,000 miles or 3 years. Disassemble, clean and repack both ends



3-SPEED TRANSMISSION (6 pts.)

Conoco Automatic Transmission Fluid Type A

4-SPEED TRANSMISSION

V-8 (8 pts.) Dart (8½ pts.)

Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

TORQUEFLITE TRANSMISSION

V-8 273 cu. in. engine, Dart (8 qts.)
Other V-8 (9 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

Dart, V-8 Coronet ex. Station Wagon, Charger (2 pts.)
V-8 Coronet Station Wagon, Polara, Monaco (4 pts.)

(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

COOLING SYSTEM: Dart, V-8 273 cu. in. engine **17 qts.** 318 cu. in. engine **20 qts.** Others **16 qts.** With heater, and/or with air conditioning or high-capacity system add **1 qt.**

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 mile

AIR CLEANER—OIL BATH TYPE
Clean base every 4000 miles. Fill to level mark with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

CARBURETOR CHOKE SHAFT
Clean every 4000 miles Remove air cleaner to service

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 36,000 miles. See General Instructions.

UNIVERSAL JOINT SPLINE
Coat spline evenly with CONOCO SUPER LUBE M every 36,000 miles.

GAS TANK: 18-25 gals.

FORD FALCON—1960-'62

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- Conoco Steering Gear Grease (SG)
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

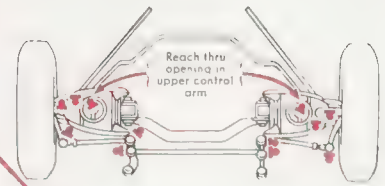
CRANKCASE (3½ qts.)

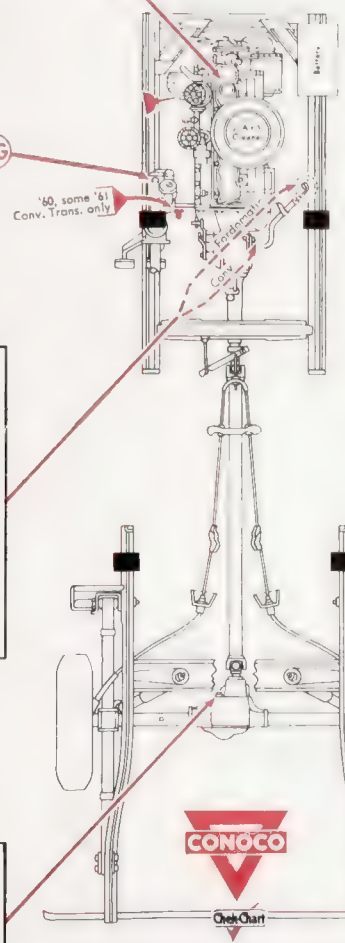
Drain and refill: '62—6000 miles
'60-'61—4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade





STEERING GEAR (SG)
Remove plug and fill

TRANSMISSION

3-Speed (2½ pts.) 4-Speed (4¾ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

FORDOMATIC DRIVE (6¼ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '60 every 24,000 miles. See General Instructions

REAR AXLE (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

COOLING SYSTEM: 8¾ qts. (with heater 9¾ qts.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 10,000 miles.

CRANKCASE VENTILATOR VALVE
When equipped, all valves except jiggle-pin type, disassemble and clean valve and all parts every 5000 miles. Jiggle-pin type, install new valve every 5000 miles and clean all other parts.

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles ('60-'61); 6000 miles ('62) or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

HAND BRAKE SHAFT
Clean and coat sliding surface sparingly with CONOCO SUPER LUBE every 10,000 miles. (Under left side of instrument panel.)

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINTS
Every 24,000 miles. See General Instructions

UNIVERSAL JOINT SPLINE
(1960-'61 Fordomatic) Clean, brush approx. 1 oz. CONOCO SUPER LUBE M evenly on splines every 24,000 miles.

GAS TANK: 14 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22NF	40
	24F	55

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi

1960-61 ..... 160-180*
1962 ..... 150-190*
* Maximum variation between cylinders, 10 psi

SPARK PLUGS
Autolite BF82
Gap: .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: New points .025" or 40° dwell
Used points set by dwell only to 40°
Dwell angle: 37°-42

CONDENSER
FoMoCo
Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug
4. Disconnect distributor vacuum line
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
Manual Trans. 4 (Allowable range, 2 -9)
Auto. Trans. 10 (Allowable range, 2 -15)

FUEL PUMP
AC model 5594897
Pressure: 3½-5½ lb. at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
HOLLEY	
1-bbl.	1-1½

ENGINE IDLE SPEED
Manual Trans.: 1960, 500-525 rpm; 1961-62, 500 550 rpm, with positive crankcase ventilation, 550 600 rpm

Auto. Trans.: 1960, 475-500 rpm in DRIVE; 1961-62, 475-525 rpm, with positive crankcase ventilation, 525-575 rpm; in DRIVE

VALVE CLEARANCES
(engine hot and running)
Intake .016"; exhaust .016

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated

Adjust the brakes as follows:
1. Disconnect parking brake cable at equalizer
2. Using a suitable tool inserted into adjustment opening, turn star wheel adjuster until slight drag is felt when wheel is turned
3. Back off adjustment until drum turns freely without drag
4. Repeat procedure at each wheel
5. Reconnect parking brake cable and adjust

Bleeding sequence: RR, LR, RF, LF

FORD SIX GALAXIE, CUSTOM—1965-'66

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22HF	45
	24F	55
	27HF	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

All 150-200

Maximum variation between cylinders, 20 psi

SPARK PLUGS

Autolite: BF42 except with economy carburetor, BF82
Gap: .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS

FoMoCo
Gap: New points .025" or 40° dwell
Used points set by dwell only to 40°
Dwell angle: 37°-42

CONDENSER

FoMoCo
Capacity: .21-.25 mfd

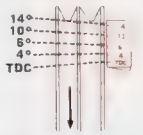
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):

Manual Trans. 6°*; California cars with Thermactor, TDC

Auto. Trans. 10°*; California cars with Thermactor, TDC

* For optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC

FUEL PUMP

AC mechanical
Pressure: 4-6 lb. at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

FORD	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl.	1-1½	index	index

ENGINE IDLE SPEED

Manual Trans. 500-525 rpm*; California cars with Thermactor, 625-650 rpm*
Auto. Trans. 500-525 rpm*; California cars with Thermactor, 550-575 rpm*; in DRIVE
With air conditioning, same rpm as listed but with unit turned ON and in operation for 20 minutes
* With headlights turned ON and carburetor air cleaner removed

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

1966 front disc brakes require no adjustment. Replace pads when shoe and lining is .195" thick. Others, self-adjusting brakes are used. Adjustment is not normally required

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- TA Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- SG Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Repack front suspension and steering linkage every 36,000 miles or 36 months. CAUTION: Apply sparingly. See General Instructions

CRANKCASE (4 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions
Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube

DISTRIBUTOR OIL CUP

Every 12,000 miles

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION (3½ pts.)
TRANS. WITH OVERDRIVE (3¾ pts.)

Individual drain plugs, fill thru trans. plug
Conoco Universal Gear Lubricant SAE No.

All temperatures	80

CAUTION: Fill slowly. Recheck level after short operation

AUTOMATIC DUAL RANGE

(Code 6) (10¼ qts. dry capacity. Fill to full mark)

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

Every 36,000 miles or 36 months. Remove and replace plug

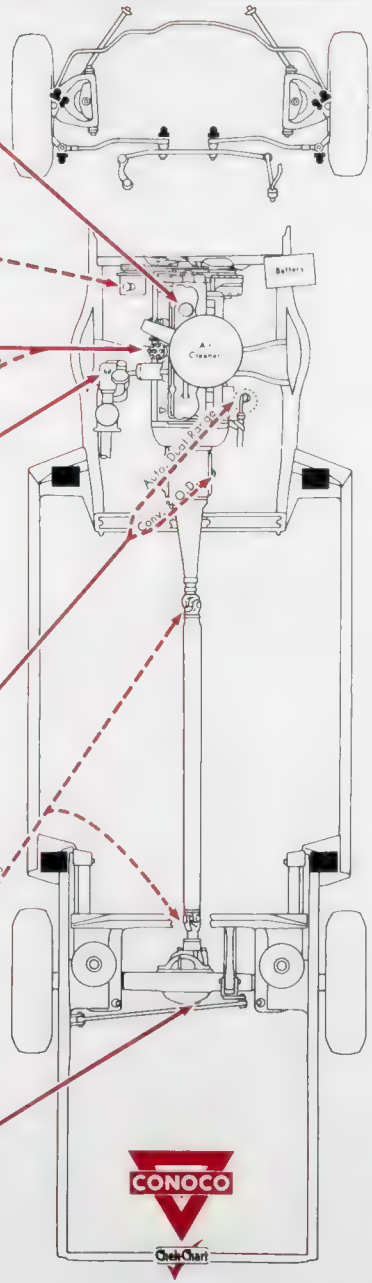
Special adapter required

REAR AXLE

'65 (5 pts.)
'66: WDC, WDD (5 pts.) WDT (5½ pts.)
'66 Limited-Slip WDT-H (5¼ pts.)
Others (4½ pts.)
('66 Axle identification tag attached to housing)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90



COOLING SYSTEM: 12 qts. (with heater 13 qts.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

AIR CLEANER—THERMACTOR AIR PUMP FILTER

(California cars only) Replace [illegible] every 12,000 miles

CRANKCASE VENTILATOR VALVE

Install new valve every 6000 miles. Disassemble and clean all parts every 6000 miles

FUEL FILTER

Replace fuel filter: every 12,000 mile[illegible] as required ('66)

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES

Refer servicing to Authorized Agency.

GAS TANK: Station Wagon 20 gals. Others 25 gals.

FORD V-8 GALAXIE, CUSTOM—1965-'66

KEY

- Conoco Super Lube M
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Repack front suspension and steering linkage every 36,000 miles or 36 months. CAUTION: Apply sparingly. See General Instructions

CRANKCASE

'65-'66 289 cu. in. eng., '66 390, 428 cu. in. engs. (4 qts.) Others (5 qts.)

Drain and refill: 6000 miles or 6 months See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION

3-Speed (3½ pts.)
4-Sp. Warner (3½ pts.) 4-Sp. Ford (4 pts.)

TRANS. WITH OVERDRIVE

289 cu. in. engine (3¾ pts.) Others (4½ pts.)

Individual drain plugs, fill thru trans. plug

Conoco Universal Gear Lubricant SAE No

All temperatures	80

CAUTION: Fill slowly. Recheck level after short operation

CRUISE-O-MATIC (10 qts.)

AUTOMATIC DUAL RANGE

289 cu. in. engine (10¼ qts.)
390, 428 cu. in. engines (13¼ qts.)
Dry capacities. Fill to full mark

Conoco Automatic Transmission Fluid Type A

See General Instructions

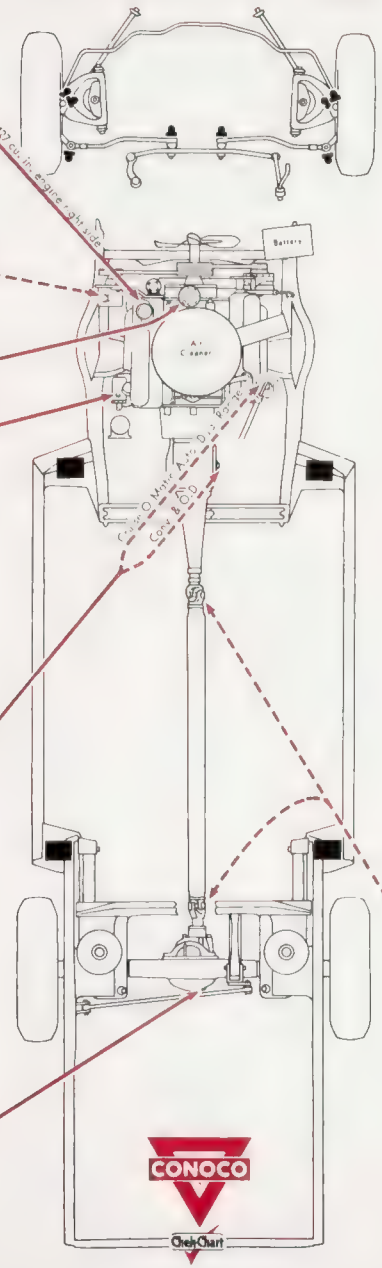
REAR AXLE

'65 427 cu. in. eng. (5½ pts.) Others (5 pts.)
Limited-Slip (5½ pts.)
'66: WDC, WDD (5 pts.) WDT (5½ pts.)
'66 Limited-Slip WDT-H (5¼ pts.)
Others (4½ pts.)

('66 Axle identification tag attached to housing)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90



COOLING SYSTEM: 289 cu. in. engine 14 qts. Others 19½ qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

AIR CLEANER—THERMACTOR AIR PUMP FILTER

(California cars only) Replace air pump filter every 12,000 miles.

CRANKCASE VENTILATOR VALVE

Install new valve every 6000 miles. Disassemble and clean all parts, including filter on 427 cu. in. engine, every 6000 miles.

FUEL FILTER

Replace fuel filter: every 12,000 miles when located at left front of engine (all '65, some '66); replace as required when located at base of carburetor (other '66).

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES

Refer servicing to Authorized Agency.

UNIVERSAL JOINTS

Every 36,000 miles or 36 months. Remove and replace plug
Special adapter required

GAS TANK: All '65, '66 Station Wagon 20 gals. Others 25 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
289; 352, 390 M.T.	22HF	45
289*; 352, 390 A.T., M.T.*	24F	55
352, 390 A.T.*; 427, 428	27HF**	70**●

* Optional ** 289, optional ● 428, 80

COMPRESSION PRESSURE

(at cranking speed with throttle open)

	psi
289 engine	130-170
352, 390 2-bbl., 427 engines	160-200
390 4-bbl., 428 engines	170-210

Maximum variation between cylinders, 20 psi

SPARK PLUGS

Autolite: 289, 352, 390, 428, BF42; 427, BF32
Gap: BF42 .032"-.036"; BF32 .028"-.032"
Torque: 15-20 ft. lb.

IGNITION POINTS

FoMoCo
Gap: New single points .017" or 28° dwell
Used single points set by dwell only to 28°
Dual points .019"-.021"
Dwell angle: Single points 26°-31°. Dual points: Transistor ignition, 22°-24°; others, total dwell 30°-33°, each set with equal dwell

CONDENSER

FoMoCo Capacity: .21-.25 mfd

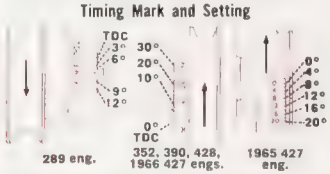
Cylinder Numbering Sequence

Firing Order: 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line, reset idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):

		Thermactor
289	6°†	TDC
1965: 352, 390	6°*†	—
1966: 352	10°*†	10°†
390	10°*†	6°†
427	8°*†	—
428	10°*†	6°†

* For high altitudes or optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not over 5° normal setting
† If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC

FUEL PUMP

AC mechanical
Pressure: 289 eng. 4-6 lb.; 352, 390, 427, 428 engs. 4½-5½ lb.; at 500 rpm
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1965 All models	1-1½	index*	index*
1966: 289 2-bbl.	1-1½	index	2 rich
352 4-bbl.	1-1½	—	index
Thermactor	1-1½	—	1 rich
390 2-bbl.	1-1½	index	index
390, 428 4-bbl.	1-1½	2 rich	1 rich
427 (2) 4-bbl.	1-1½	3 lean	—

* 2-bbl. Ford C5AF-B, -AJ carb., 2 rich

ENGINE IDLE SPEED

Manual Trans.: 289, 352, 390 4-bbl., 428, 575-600 rpm*; Thermactor, 610-635 rpm*; 390 2-bbl., 475-500 rpm*; 427, 700-800 rpm*
Auto. Trans.: 475-500 rpm*; Thermactor, 525-550 rpm*; in DRIVE
With air conditioning, same rpm but with unit turned ON and in operation for 20 minutes
* With headlights turned ON, carburetor air cleaner removed and idle compensator valve, when so equipped, held closed

VALVE CLEARANCES

(engine hot and running)
427 eng.: Intake .025"; exhaust .025"
289, 352, 390, 428 engs.: Hydraulic lifters

BRAKE ADJUSTMENT

1966 front disc brakes require no adjustment. Replace pads when shoe and lining is .195" thick Others, self-adjusting brakes are used. Adjustment is not normally required

Bleeding sequence: RR, LR, RF, LF

FORD V-8—1961 EXCEPT THUNDERBIRD; 1962-'64 GALAXIE

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1961-62 All	29NF	55, 65
1963-64: 260, 289 engs.	24F	55, 65
352, 390 engs.	29NF	55, 65
406, 427 engs.	27F	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) — psi

292 eng. 140-180
352, 390*, 406, 427 engs. 160-200
* Late 1963 390; 1964 4-bbl. carb. 390 . . . 170-210
260, 289 engs. 130-170
Maximum variation between cylinders, 20 psi

SPARK PLUGS

Autolite: 292 eng. BF82; 390 Super, 406 Super, 427, 1963 406 eng. BF32; 260, 289, 352, 390, 1962 406 engs. BF42
Gap: .032"-.036", except 1962 406 Super eng. .025; 1963 390 Super, 406, 427 engs. .028"-.032"
Torque: 15-20 ft. lb.

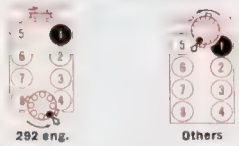
IGNITION POINTS

FoMoCo
Gap: New single points .017" or 28° dwell
Used single points set by dwell only to 28°
Dual points, each set .019"-.021"
Dwell angle: Single points 26°-31°
Dual points, total 32°-34°, 1964 33°-36°; each set with equal dwell

CONDENSER

FoMoCo — Capacity: .21-.25 mfd

Cylinder Numbering Sequence



Firing Order:
292 eng. 1, 5, 4, 8, 6, 3, 7, 2
Others 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE See Page 56

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
Figures listed are in degrees

Engine	1961 MT	1961 AT	1962 MT	1962 AT	1963 MT	1963 AT	1964 MT	1964 AT
260					6	10		
289					6	10	6	10
292	3	10	5	12				
352	3	6	5	8	3	6	6**†	10**
390	3	6	5	8	3	6	6**	6**
390 Super*	10–19		10–19		8**	–	4**	6**
390 Police	–	–	–	–	–	–	4**	6**
406	–	–	8**	–	8**	–	–	–
406 Super	–	–	10–19		–	–	–	–
427	–	–	–	–	8**	–	8**	–

* 1964 4-bbl. ** Range: Min. 2°; max. 8
† Range: Min. 2°; max. 5° over setting listed but just short of audible detonation, unless otherwise specified. Do not retard initial advance beyond 2° BTDC

FUEL PUMP

AC mechanical
Pressure: 4-6 lb.; except 1963 260 eng. 4-5 lb.; 1964 352, 390, 427 engs. 4½-6½ lb.; at 500 rpm.
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
FORD			
2-bbl.	1-1½	index*	2 lean*
4-bbl.	1-1½	index**	2 lean**
HOLLEY			
2-bbl. (Primary)	1-1½	index	—
(Secondary)	¾-1¼	—	—
4-bbl. (Primary)	1-1½	index	—
(Secondary)	1-1½	—	—

* 260, 1963 289 engs., 4 lean, 1964 289 engs., 2 rich except Carb. Part No. C4AF-9510-DD, choke index M.T. ** 1963 390 eng., 2 lean; 1964 352 eng., 1 lean M.T., 3 lean A.T., 390 eng., 1 rich M.T., 1 lean A.T.

ENGINE IDLE SPEED

Manual Trans.: 1961-62: 500-525 rpm, except 1961 390 eng. 575-600 rpm; 390 Super eng. 675-700 rpm; 1962 406 Super eng. 675-700 rpm
1963-64: 575-600 rpm; except 427 eng. 700-800 rpm
Auto. Trans.: 450-475 rpm in DRIVE; except 1962 390 eng. & 1964 289, 352, 390 engs. 475-500 rpm; 1964 390 Police 550-575 rpm
Air Cond.: Same rpm as listed, with unit turned ON and in operation for 20 minutes

VALVE CLEARANCES

(engine hot and running)
292 eng.: Intake .019"; exhaust .019"
390, 406, 427 engs.: Intake .025"; exhaust .025"
Others: Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting
Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

CRANKCASE

260, 289 cu. in. eng. (4 qts.) Others (5 qts.)
Drain and refill: '63-'64—6000 miles or 6 mos.
62—6000 miles
'61—4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and reoil with crankcase grade

DISTRIBUTOR OIL CUP
Every 12,000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

POWER STEERING RESERVOIR (TA) CAUTION
Every 6000 miles. Check level. Maintain level to "F" mark. With air conditioning, maintain level to ¾" to 1" from top of reservoir
CAUTION: '63-'64 filter element in reservoir, do not damage

STEERING GEAR (SG)
Every 6000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION

'61-'62 3-Speed ex. 352, 390 cu. in. eng., 4-Speed (3 pts.)
'61-'62 3-Speed 352, 390 cu. in. eng. (4 pts.)
'63-'64 3-Speed (3½ pts.)
'63-'64 4-Speed Warner (3½ pts.)
4-Speed Ford (4 pts.)

TRANS. WITH OVERDRIVE

'61-'62 352, 390 cu. in. Special engines (4 pts.)
Others (3 pts.)
'63-'64 260, 289 cu. in. eng. (3¾ pts.)
Others (4½ pts.)

Individual drain plugs, fill through trans. plug

Conoco Universal Gear Lubricant SAE No.
All temperatures 80

CAUTION: Fill slowly. Recheck level after short operation

CRUISE-O-MATIC TRANS.

'61-'64 352, 390 cu. in. eng. (10 qts.)
'63-'64 289 cu. in. engine (10 qts.)
C4 289 cu. in. engine (8½ qts. dry capacity. Fill to full mark)

FORDOMATIC DRIVE

'61-'62, '63-'64 352, 390 cu. in. eng. (9 qts.)
'63-'64 260, 289 cu. in. eng. (6 qts.)

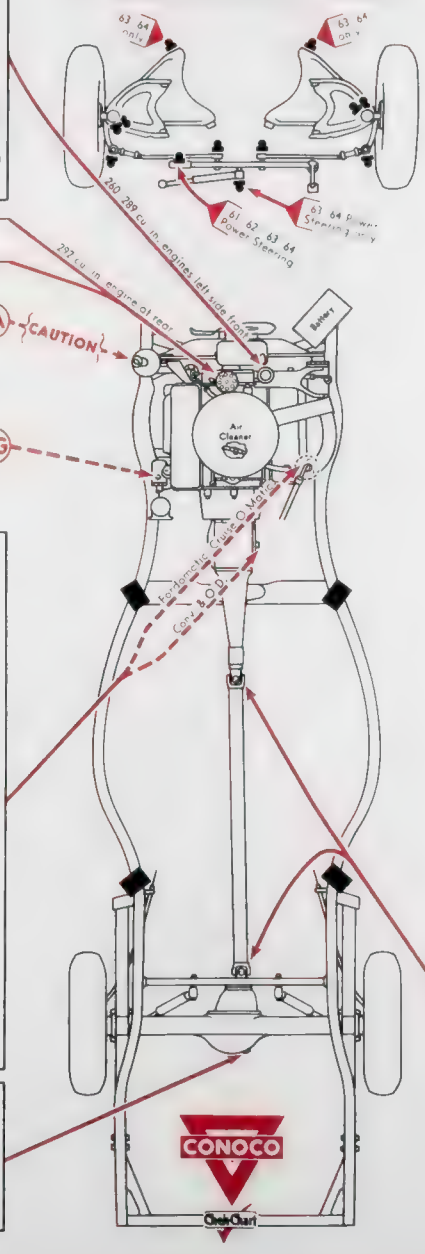
Conoco Automatic Transmission Fluid Type A
See General Instructions

REAR AXLE

'61-'62 (4½ pts.) '63-'64 406, 427 cu. in. eng. (5½ pts.) Others (5 pts.)
(Also includes Equa-Lock axle)

Conoco Universal Gear Lubricant SAE No.
All temperatures 90

Repack front suspension and steering linkage: '61-'62, every 30,000 miles; '63-'64, 36,000 miles. **CAUTION:** Apply sparingly. See General Instructions



UNIVERSAL JOINTS
'61-'62, every 30,000 miles; '63-'64, 36,000 miles. Remove and replace plug
Special adapter required

COOLING SYSTEM: '61-'62, **19 qts.**, '63-'64 260, 289 cu. in. engines **13½ qts.**, others **19½ qts.** (with heater add **1 qt.**)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Replace polyurethane element every 12,000 miles.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE
When equipped, all valves except jiggle-pin type, disassemble and clean valve and all parts every 6000 miles. Jiggle-pin type, install new valve every 6000 miles and clean all other parts

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles ['61]; 6000 miles ['62-'64] or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINT SPLINE
[1961 Cruise-O-Matic or Fordomatic] Clean, brush approx. 1 oz. CONOCO SUPER LUBE M evenly on splines every 30,000 miles.

GAS TANK: '61-'62, **20 gals.**, Station Wagon **21 gals.** '63-'64, **19½ gals.**, Station Wagon **20½ gals.**

FORD SIX FAIRLANE—1962-'65

KEY

- Conoco Super Lube M
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

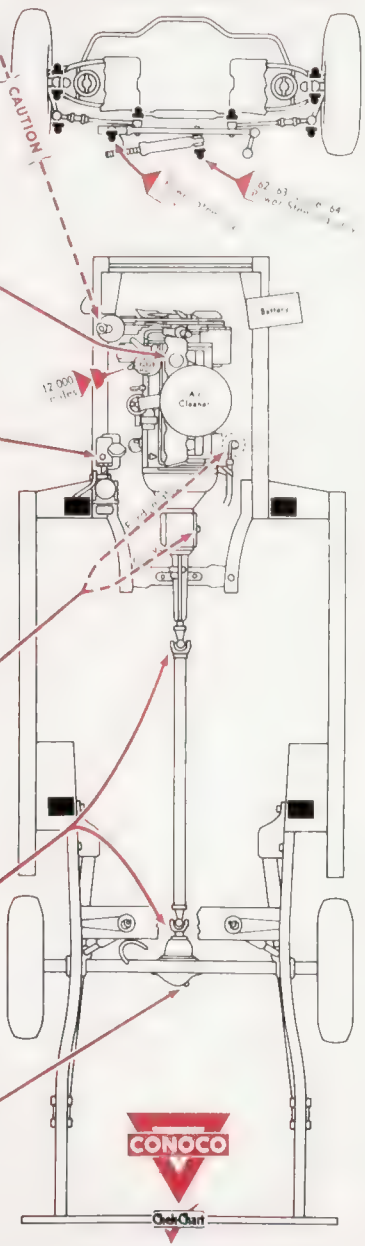
POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. With out gage, maintain level to bottom of filler tube

CAUTION: '63-'64 filter element in reser voir, do not damage

Repack front suspension and steering linkage: '62, every 30,000 miles or 2 years; '63-'65, 36,000 miles or 3 years. CAUTION: Apply sparingly See General Instructions

COOLING SYSTEM: 8½ qts. (with heater 9½ qts.)



CRANKCASE (3½ qts.)

Drain and refill: 6000 miles or 6 months See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION

3-Speed (2 pts.) 3-Speed H.D. (3½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

FORDOMATIC DRIVE

(7¾ qts. dry capacity. Fill to full mark)

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

'62 every 30,000 miles or 2 years; '63-'65 36,000 miles or 3 years. Remove and replace plug

Special adapter required

REAR AXLE (4½ pts.)

(Also includes Equa-Lock axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures . 90

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Replace polyurethane element every 12,000 miles.

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

POSITIVE CRANKCASE VENTILATING SYSTEM

Some '63 no valve, disassemble and clean tube and separator every 6000 miles. '62, other '63, early '64 when equipped, all valves except jiggle-pin type, disassemble and clean valve and all parts every 6000 miles. Other '64, all '65 jiggle-pin type, install new valve every 6000 miles and clean all other parts.

FUEL FILTER

Replace fuel filter every 12,000 miles.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES

Refer servicing to Authorized Agency.

SPRINGS

Equipped with friction inserts. Do not lubri cate.

GAS TANK: 15½-16 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1962-64	22NF	40
	24F	55
1965	22HF	45
	24F	55

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
1962-64	150-190
1965	155-195

Max. variation· 1962-63, 10 psi, 1964-65, 20 psi

SPARK PLUGS
Autolite BF82
Gap: .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: New points .025" or 40° dwell
Used points set by dwell only to 40
Dwell angle: 37°-42

CONDENSER
FoMoCo
Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
1962: Manual Trans. 4° (Allowable range, 2°-9°)
Auto. Trans. 10° (Allowable range, 2°-15°)
1963: Manual Trans. 6° (Allowable range, 2°-11°)
Auto. Trans. 12° (Allowable range, 2°-17°)
1964-65: Man. Trans. 6°*; Auto. Trans. 12°*
* For optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. Do not retard initial advance beyond 2° BTDC

FUEL PUMP
AC mechanical
Pressure: 1962-64, 3½-5½ lb.; 1965, 4-5 lb.; at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
FORD 1-bbl.	1-1½	manual*	manual**
HOLLEY 1-bbl.	1-1¼	—	—

* 1965, 2 lean ** 1965, index

ENGINE IDLE SPEED
Manual Trans.: 1962-63, 500-550 rpm; with positive crankcase ventilation, 550-600 rpm; 1964, 500-525 rpm; 1965, 500-550 rpm*
Auto. Trans.: 1962, 475-525 rpm in DRIVE with positive crankcase ventilation, 525-575 rpm; 1963-65, 500-525 rpm in DRIVE*
With air conditioning, same rpm as listed but with unit turned ON and in operation for 20 minutes
* 1965, Headlights ON

VALVE CLEARANCES
(engine hot and running)
1962: Intake .016"; exhaust .016"
1963-65: Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes are used. Adjustment is not normally required

Bleeding sequence: RR, LR, RF, LF

FORD THUNDERBIRD—1961-'62

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	29NF	65
	27F	70

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi

All 180*

* Permissible variation is plus or minus 20 psi

SPARK PLUGS

Autolite: 390 Super eng. BF32; others BF42
Gap: 390 Super eng. .025"; others .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS

FoMoCo
Gap: New points .017" or 28° dwell
Used points set by dwell only to 28°
Dwell angle: 26°-31°

CONDENSER

FoMoCo
Capacity: .21-.25 mfd

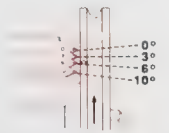
Cylinder Numbering Sequence

Firing Order: 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
1961: 6° (Allowable range, 2°-11°)
1962: 390 eng. 8° (Minimum allowable, 2°)
390 Super eng. 6° (Minimum allowable, 2°)

FUEL PUMP

AC model 5593450
Pressure: 4-6 lb. at 500 rpm
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
FORD			
4-bbl.	1-1½	—	2 lean
HOLLEY			
2-bbl. (Primary)	1-1½	—	index
(Secondary)	¾-1¼	—	—

ENGINE IDLE SPEED

1961: 450-475 rpm in DRIVE
1962: 475-500 rpm in DRIVE

VALVE CLEARANCES
(engine hot and running)

390 Super eng.: Intake .025"; exhaust .025"
390 eng.: Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, proceed as follows:

1. Turn star wheel adjuster until shoes contact drum lightly
2. Remove drums and mark tooth on star wheel contacted by adjusting lever
3. Hold adjusting lever away from star wheel and back off adjustment ¾ turn with finger pressure only. If adjustment screw does not turn easily, remove and lubricate
4. Reinstall drums, wheels and backing plate adjusting hole cover
5. Operate car in reverse and apply brakes several times to bring shoes into proper adjustment

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

CRANKCASE (5 qts.)
Drain and refill: '62—6000 miles
'61—4000 miles
See Page 1 for exceptions
Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)
Without air conditioning check fluid level with dipstick. Maintain level to "F" mark. With air conditioning check level. Maintain level to ¾" to 1" from top of reservoir
CAUTION: Filter element in reservoir do not damage

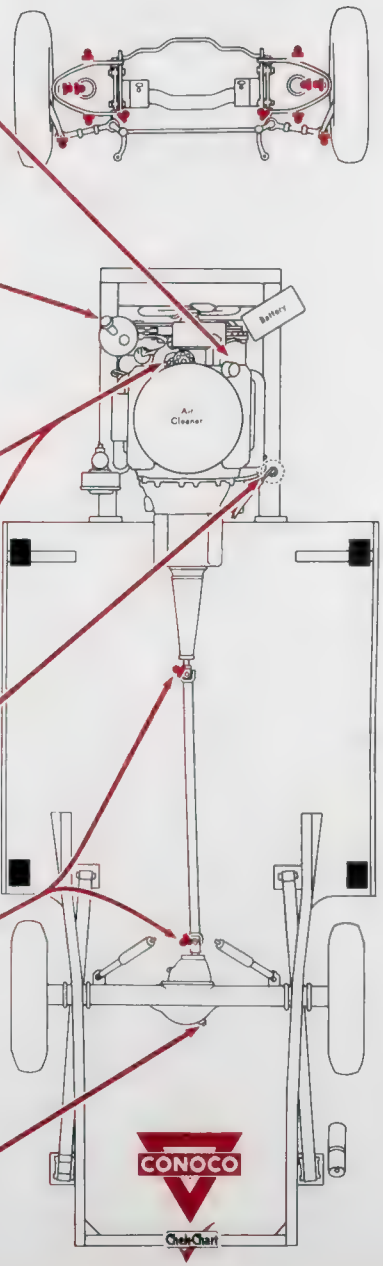
DISTRIBUTOR OIL CUP

DISTRIBUTOR CAM CENTER
Under rotor—4 drops on wick

CRUISE-O-MATIC (10 qts.)
Conoco Automatic Transmission Fluid Type A
See General Instructions

UNIVERSAL JOINTS
Every 4000 miles. Special adapter required

REAR AXLE (4½ pts.)
(Also includes Equa-Lock axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90



COOLING SYSTEM: 19 qts. (with heater 20 qts.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 10,000 miles

CRANKCASE VENTILATOR VALVE
When equipped, all valves except jiggle-pin type, disassemble and clean valve and all parts every 5000 miles. Jiggle-pin type, install new valve every 5000 miles and clean all other parts

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace [illegible] every 4000 miles ('61): 6[illegible] re often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINT SPLINE
(1961) Clean, brush approx. 1 oz. CONOCO SUPER LUBE M evenly on splines every 24,000 miles.

GAS TANK: 20 gals.

FORD FALCON SIX, V-8—1963-'65

KEY

- Conoco Super Lube M
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Repack front suspension and pitman arm stud every 36,000 miles or 36 months. **CAUTION:** Apply sparingly. Steering linkage, sealed at factory, requires no service. If looseness is evident, refer to Authorized Agency. See General Instructions

COOLING SYSTEM: Six **8½ qts.** V-8: '63-'64, **13½ qts.** '65, **14 qts.** (with heater add **1 qt.**)

CRANKCASE

Six (**3½ qts.**) V-8 (**4 qts.**)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filter cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube. '63-'64 V-8 with air conditioning maintain level to ¾" to 1" from top of reservoir

CAUTION: '63-'64 filter element in reservoir, do not damage

DISTRIBUTOR OIL CUP

Every 12,000 miles

Not on '65 V-8

V-8 only

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to right and fill. With power brakes, fill thru upper cap screw hole, with steering wheel centered

TRANSMISSION

3-Speed: Six (**2 pts.**) V-8 (**3½ pts.**)
Six 4-Speed (**4½ pts.**)
V-8 4 Speed Warner (**3½ pts.**)
4-Speed Ford (**4 pts.**)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

FORDOMATIC DRIVE (7¾ qts.)
CRUISE-O-MATIC C4 (8¾ qts.)

Dry capacities. Fill to full mark

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

Every 36,000 miles or 36 months. Remove and replace plug

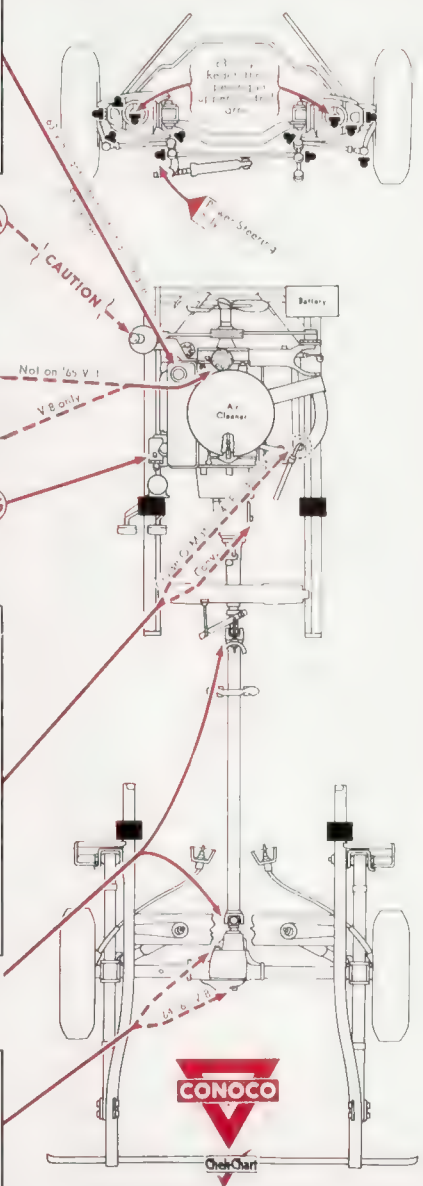
Special adapter required

REAR AXLE

Six (**2½ pts.**) V-8 (**4½ pts.**)
(Also includes Equa-Lock axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Replace polyurethane element every 12,000 miles.

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

POSITIVE CRANKCASE VENTILATING SYSTEM

Early '63 Six no valve, disassemble and clean tube, filter and separator every 6000 miles. Other '63 Six, early '64 Six, all '63 V-8, early '64 V-8, when equipped, all valves except jiggle-pin type, disassemble and clean valve every 6000 miles. Also clean all parts including filter on '63 V-8. Other '64 Six and V-8, all '65 jiggle-pin type, install new valve every 6000 miles. Also clean all other parts.

FUEL FILTER

Replace fuel filter every 12 000 miles

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT

Refer servicing to Authorized Agency.

SPRINGS

Equipped with friction inserts. Do not lubricate.

GAS TANK: 14-20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
6-cylinder 1963-64	22NF	40
	24F	55, 65
V-8 1963-64	24F	55, 65
All 1965	22HF	45
	24F	55

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
6-cylinder 1963-64	150-190*
1965	155-195
All V-8	130-170*

* Max. variation: 1963, 10 psi; 1964-65, 20 psi

SPARK PLUGS
Autolite: 6-cyl. BF82; V-8 BTF 42
Gap: .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: 6-cyl. Gap: New points .025" or 40° dwell. Used points set by dwell only to 40°; V-8 Gap: New points .017 or 28° dwell. Used points set by dwell only to 28°
Dwell angle: 6-cyl. 37°-42°; V-8, 26°-31

CONDENSER
FoMoCo Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order:
6-cyl. **1, 5, 3, 6, 2, 4** V-8 **1, 5, 4, 2, 6, 3, 7, 8**

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
6-cyl.: 1963: M.T. 4° (2°-9°); A.T. 10° (2°-15°)
1964: M.T. 144 eng. 8°*; 170 eng. 6°*
Auto. Trans. 12°*
1965: M.T. 6°*; A.T. 12°*
V-8: 1963: M.T. 6° (2°-11°); A.T. 10° (2°-15°)
1964: Manual Trans. 6°*; Auto. Trans. 10°*
1965: 6°*

* For optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. Do not retard initial advance beyond 2° BTDC

FUEL PUMP
AC mechanical
Pressure: 6-cyl. 1963-64 3½-5½ lb., 1965 4-5 lb.; V-8 1963-64 4-6 lb., 1965 4½-5½ lb.; at 500 rpm
Volume: 6-cyl. 1 pint in 30 seconds; V-8, 1 pint in 20 seconds; at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
FORD			
1-bbl. 6-cyl.	1-1½	index*†	index
2-bbl. V-8	1-1½	index**	2 rich***

* 1963, manual † 1965, 200 eng. C5OF E 2 lean
1963, 2 lean; 1964, 2 rich * 1963, 2 lean

ENGINE IDLE SPEED
6-cyl.: Manual Trans. 1963-64, 500-525 rpm; 1965, 500-575 rpm*
Auto. Trans. 500-525 rpm* in DRIVE
V-8: Manual Trans. 1963-64 575-600 rpm*
Auto. Trans. 1963-64 475-500 rpm; 1965, 500-525 rpm*; in DRIVE
With air conditioning, as listed above but with unit turned ON and in operation for 20 minutes
* 1965, Headlights ON

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes are used. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, adjust the brakes as follows:
1. Expand shoes until a slight drag is felt when turning drums
2. Remove brake drums
3. Hold adjusting lever away from adjusting screw, and back off adjusting screw ¾ turn
4. Reinstall drums and wheels
5. Operate car in reverse and make 5 or 6 brake applications to bring shoes into proper adjustment
6. Reconnect and adjust parking brake cable

Bleeding sequence: RR, LR, RF, LF

FORD V-8 FAIRLANE—1962-'65

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1962-64	24F	55, 65
1965	22HF	45
	24F	55

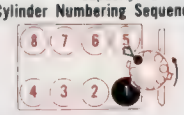
COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All 130-170
Max. variation: 1962-63, 10 psi; 1964-65, 20 psi

SPARK PLUGS
Autolite: 289 High Perf. BF32; others 1962 BF42, 1963-65 BTF42
Gap: 1962-63 .035"; 1964 .032"-.036"; 1965 BF32 .028"-.032", BTF42 .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: New single points .017" or 28°
Used single points set by dwell only to 28°
Dual points, 1962-64 .019"-.021", 1965 .018"-.022"
Dwell angle: Single points 26°-31°. Dual points, total 1962-64 30°-33°, 1965 32°-35°; each set with equal dwell

CONDENSER
FoMoCo Capacity: .21-.25 mfd

Cylinder Numbering Sequence



Firing Order: 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

1962 1963 early 1963 late 1964-65

Timing Setting (Before Top Dead Center):
1962: 5° (Allowable range, 2°-10°)
1963: 221 eng. Manual Trans. 4° (Range 2°-9°)
Auto. Trans. 12° (Allowable range, 2°-17°)
260 eng. Manual Trans. 4° (Range 2°-9°)
Auto. Trans. 10° (Allowable range 2°-15°)
289 eng. 10° (Allowable range, 2°-15°)
1964: 260, 289 (2-bbl. carb.) engs.
Manual Trans. 6°*; Auto. Trans. 10°*
289 (4-bbl. carb.) eng. Manual Trans. 10°*
1965: 289 High Performance, 12°*
289 Others, 6°*
* If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC

FUEL PUMP
AC mechanical
Pressure: 1962-64, 4-6 lb.; 1965, 4½-5½ lb.; at 500 rpm
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

FORD	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1962 2-bbl.	1-1½	2 lean	2 lean
1963 2-bbl.	1-1½	4 lean	4 lean
1964 2-bbl.	1-1½	2 rich	2 rich
4-bbl.	1-1½	3 lean	3 lean
1965 2-bbl.	1½	2 rich*	2 rich
4-bbl.	1-1½	2 rich**	2 rich

* C5ZF-A & G, index
** C4GF-AE, index

ENGINE IDLE SPEED
Manual Trans.: 1962, 500-525 rpm; 1963-64, 575-600 rpm except 289 H.P. 700-800 rpm; 1965, 575-625 rpm* except 289 H.P. 750-800 rpm*
Auto. Trans.: 1962-64, 475-500 rpm; 1965, 2-bbl. 475-525 rpm*, 4-bbl. 500-550 rpm*, except 289 H.P. 650-675 rpm*; in DRIVE
With air conditioning, same rpm as listed but with unit turned ON and in operation for 20 minutes
* 1965, Headlights ON

VALVE CLEARANCES
(engine hot and running)
289 High Perf.: Intake .020"; exhaust .020".
Others: Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes are used. Adjustment is not normally required

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- TA Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- SG Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Repack front suspension and steering linkage: '62 every 30,000 miles or 2 years; '63-'65, 36,000 miles or 3 years. CAUTION: Apply sparingly. See General Instructions

CRANKCASE (4 qts.)
Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions
Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)
Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube. '62-'64 with air conditioning maintain level to ¾" to 1" from top of reservoir
CAUTION: '63-'64 filter element in reservoir, do not damage

DISTRIBUTOR OIL CUP
Every 12,000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)
Every 6000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION
3-Speed (3½ pts.)
4-Speed Warner (3½ pts.)
4-Speed Ford (4 pts.)

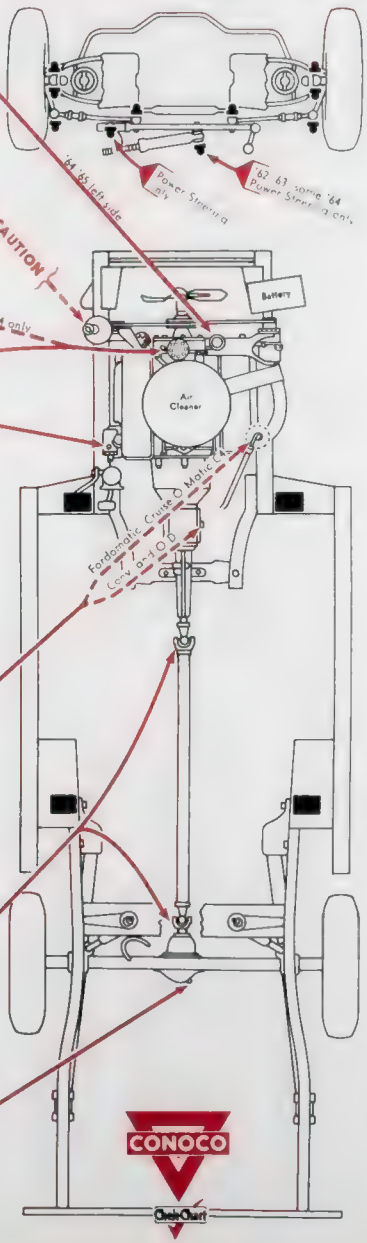
TRANS. WITH OVERDRIVE
(3½ pts.)
Individual drain plugs, fill thru trans. plug
Conoco Universal Gear Lubricant SAE No.
All temperatures 80
CAUTION: Fill slowly. Recheck level after short operation

FORDOMATIC DRIVE
(7¾ qts.)

CRUISE-O-MATIC C4
(8¾ qts.)
Dry capacities. Fill to full mark
Conoco Automatic Transmission Fluid Type A
See General Instructions

UNIVERSAL JOINTS
'62 every 30,000 miles or 2 years; '63-'65, 36,000 miles or 3 years. Remove and replace plug
Special adapter required

REAR AXLE
289 cu. in., 271-hp engine (5 pts.)
Others (4½ pts.)
(Also includes Equa-Lock axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90



COOLING SYSTEM: 14 qts. (with heater 15 qts.)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Replace polyurethane element every 12,000 miles

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE
When equipped, all valves except jiggle-pin type, disassemble and clean valve and all parts every 6000 miles. Jiggle-pin type, install new valve every 6000 miles and clean all other parts.

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

GAS TANK: 15½-16 gals.

FORD THUNDERBIRD—1963-'66

KEY

- Conoco Super Lube M
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

CRANKCASE

'63-'65 (5 qts.) '66 (4 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube. '63-'64 with air conditioning maintain level to ¾" to 1" from top of reservoir
CAUTION: '63-'64 filter element in reservoir, do not damage

DISTRIBUTOR OIL CUP

Every 12,000 miles

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

'63-'65 CRUISE-O-MATIC (10 qts.) AUTOMATIC DUAL RANGE

(Code 4) (13¼ qts. dry capacity. Fill to full mark)

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

Every 100,000 miles or 36 months. Remove and replace plug

Special adapter required

REAR AXLE

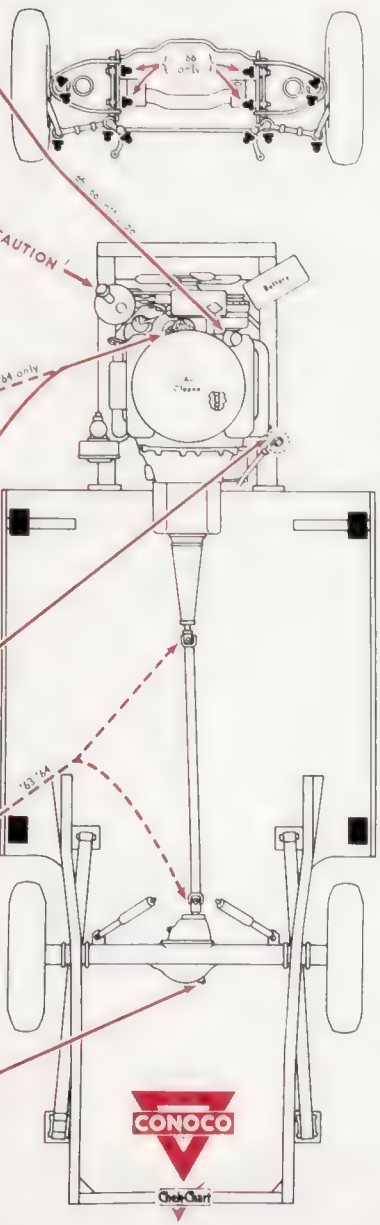
'63-'65 (5 pts.)
'66 WCD-H (5 pts.) WEF-D, -H (5½ pts.)
'66 Limited-Slip: WCA-J (4½ pts.)
WEF-E, -J (5¼ pts.)

('66 Axle identification tag attached to housing)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Repack front suspension every 100,000 miles or 36 months. CAUTION: Apply sparingly. Steering linkage, sealed—no service. If looseness is evident, refer to Authorized Agency. See General Instructions



COOLING SYSTEM: '63-'65, 19 qts., '66, 19½ qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

AIR CLEANER—THERMACTOR AIR PUMP FILTER

(California cars only) Replace air pump filter every 12,000 miles

CRANKCASE VENTILATOR VALVE

When equipped, all valves except jiggle pin type, disassemble and clean valve and all parts every 6000 miles. Jiggle-pin type, install new valve every 6000 miles and clean all other parts.

FUEL FILTER

Replace fuel filter every 12,000 miles.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT
HYDRO-LECTRIC MECHANISM
POWER BRAKES

Refer servicing to Authorized Agency.

SPRINGS

Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS

'65, every 100,000 miles or 36 months. See General Instructions.

GAS TANK: '63, 20 gals., '64-'66, 22 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1963-64	29NF	65
1963: Optional	27F	70
1964: Optional	27F	80
1965	24F	55
1966	27HF	70
1965-66: Optional	27HF	80

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

1963: Early models 180
Late models 190
1964-66 170-210
Permissible variation is plus or minus 20 psi

SPARK PLUGS

Autolite: 390 Super eng. BF32; others BF42
Gap: 390 Super eng. .025", others, .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS

FoMoCo
Gap: New single points .017" or 28° dwell
Used single points set by dwell only to 28°
Transistor ignition .019"-.021"
Dwell angle: Single points 26°-31°
Transistor ignition 22°-24°

CONDENSER

FoMoCo
Capacity: .21-.25 mfd

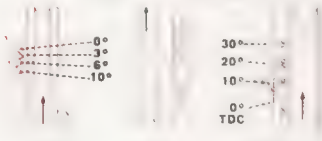
Cylinder Numbering Sequence

Firing Order: 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
1963: 6° (Allowable range, 2°-11°)
1964-65: 6° †
1966: 390 eng. 10° *†; California cars with Thermactor, 6° †
428 eng. 10 †; California cars with Thermactor, 6° †

* For high altitudes or optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting
† If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but do not exceed 2° BTDC

FUEL PUMP

AC mechanical
Pressure: 1963, 4-6 lb.; 1964, 1966, 4½-6½ lb.; 1965, 4-6 lb.; at 500 rpm
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Auto. Trans.
FORD		
4-bbl. 1963	1-1½	2 lean
1964	1½	1 lean
1965	1½	index
1966	1-1½	1 rich
HOLLEY		
2-bbl. (Primary)	1-1½	Index
(Secondary)	¾-1¼	—

ENGINE IDLE SPEED

390 Super eng. 675-700 rpm; others, 475-500 rpm*; California cars with Thermactor, 525-550 rpm*; in DRIVE
With air conditioning, as listed but with unit turned ON and in operation for 20 minutes
* With headlights turned ON (1965-66), carburetor air cleaner removed and idle compensator valve, when so equipped, held closed
On cars equipped with vacuum release parking brake, remove vacuum line from power unit of parking brake assembly and plug line to keep parking brake engaged

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

1965-66 front disc brakes require no adjustment. Replace pads when shoe and lining is .231" thick. Others, self-adjusting brakes are used. Adjustment is not normally required

Bleeding sequence: RR, LR, RF, LF

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY	AABM Group No.	Amp. Hrs.
6-cyl., V-8, 289, 390 M.T.	22NF	45
	24F	55
	27HF	70
390 A.T.	24F	55
	27HF	70

COMPRESSION PRESSURE

(at cranking speed with throttle open)	psi
6-cyl	155-195
289 eng	130-170
390 eng.	160-200

Maximum variation between cylinders, 20 psi

SPARK PLUGS
Autolite: 6-cyl., BF82; V-8, BF-42
Gap: .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: 6-cyl., New points .025" or 40° dwell; V-8, New points .017" or 28° dwell
V-8 Used points set by dwell only to 28°
Dwell angle: 6-cyl., 37°-42°; V-8, 26°-31°

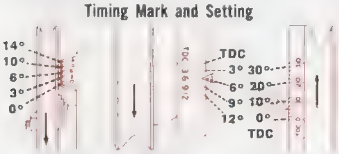
CONDENSER
FoMoCo
Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order: 6-cyl., 1, 5, 3, 6, 2, 4
V-8, 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
170, 200 engs.: Man. Trans. 6°†; Auto. Trans. 12°†; California car with Thermactor, TDC†
289 engine:
6°*; California cars with Thermactor, TDC*
390 engine:
10°*†; California cars with Thermactor, 6°*†
*If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC
†For high altitudes or optimum performance and economy, timing may be advanced up to 5° from recommended setting until engine detonates, then retard just enough to eliminate detonation

FUEL PUMP
6-cyl., AC mechanical; V-8, Carter mechanical
Pressure: 4-6 lb. except 390 eng., 4½-6½ lb.; at 500 rpm
Volume: 1 pint in 6-cyl., 30 seconds, V-8, 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

FORD	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
170 eng. 1-bbl.	1-1½	2 lean*	index
200 eng 1-bbl.	1-1½	1 lean	index
289 eng. 2-bbl.	1-1½	index	2 rich
390 eng. 2-bbl	1-1½	index	index
4-bbl.	1-1½	2 rich	1 rich

*California cars with Thermactor, 1 lean

ENGINE IDLE SPEED
Manual Trans. 575-600 rpm*†; California cars with Thermactor, 6-cyl., 625-650 rpm†; V-8, 610-635 rpm*†
Auto. Trans.: 6-cyl., 500-525 rpm†; V-8, 475-500 rpm†; California cars with Thermactor, 6-cyl., 550-575 rpm†; V-8, 525-550 rpm†; in DRIVE
With air conditioning, same rpm as listed but with unit turned ON and in operation for 20 minutes
* 390 eng. 2-bbl. 475-500 rpm†; California cars with Thermactor, 525-550 rpm†
† With headlights turned ON, carburetor air cleaner removed and, when so equipped, idle compensator valve held closed

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes are used. Models have metal knockout adjustment access plug in backing plate. Remove plug ONLY if drum cannot be removed in normal manner. Adjust brakes using brake shoe adjustment gage. For final adjustment, operate car in reverse and apply brakes firmly several times
Bleeding sequence: RR, LR, RF, LF

FORD FALCON SIX, V-8 FAIRLANE SIX, V-8 —1966

KEY

- Conoco Super Lube M
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

CRANKCASE

Six (3½ qts.) V-8 (4 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

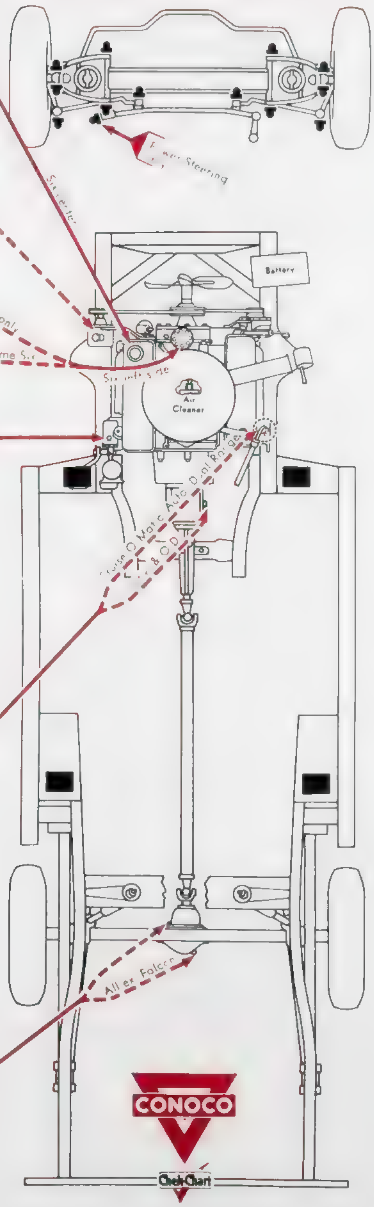
Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and reoil with crankcase grade

Repack front suspension and pitman arm stud every 36,000 miles or 36 months. **CAUTION:** Apply sparingly. Steering linkage, sealed—no service. If looseness is evident, refer to Authorized Agency. See General Instructions

COOLING SYSTEM: Six 8½ qts. V-8 390 cu. in. engine 19½ qts. Others 14 qts. (with heater add 1 qt.)



POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube

DISTRIBUTOR OIL CUP

Every 12,000 miles

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to right and fill. With power brakes, fill thru upper cap screw hole, with steering wheel centered

TRANSMISSION

3-Speed Falcon Six (2 pts.) All others (3½ pts.)
4-Speed V-8: Warner (3½ pts.) Ford (4 pts.)

TRANS. WITH OVERDRIVE

(3½ pts.)
Individual drain plugs, fill thru trans. plug

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

CAUTION: Fill slowly. Recheck level after short operation

CRUISE-O-MATIC

Six (7¾ qts.) V-8 (8¾ qts.)

AUTOMATIC DUAL RANGE

(Code 4) (13¼ qts.)
Dry capacities. Fill to full mark

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

Falcon Six (2½ pts.)
Falcon V-8, Fairlane (4½ pts.)
390 cu. in. engine (5 pts.)
Limited-Slip (4¼ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

AIR CLEANER—THERMACTOR AIR PUMP FILTER
[illegible] nly) Replace air pump filter [illegible]

CRANKCASE VENTILATOR VALVE
Install new valve every 6000 miles, also clean all other parts.

FUEL FILTER
[illegible] every 12,000 miles (V-8 [illegible] replace as required (all [illegible]

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

GAS TANK: 16-20 gals.

FORD BRONCO—1966

KEY

- Conoco Super Lube M
- Conoco Super Motor Oil SAE No. 20-20W
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Positions For Frame Engaging Lift Adapters

Lubricate steering linkage every 6000 miles or 6 months

COOLING SYSTEM: 11¾ qts. (with heater 12¾ qts.)

FRONT AXLE (3½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures — 90

CRANKCASE (6 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F. 10W-30
Above 0°F. 10W-30
Below 0°F. 5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (90)
Every 6000 miles or 6 months, Remove plug and fill

TRANSMISSION (3½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

TRANSFER CASE (2¾ pts.)

Conoco Super Motor Oil SAE No.

All temperatures — 50

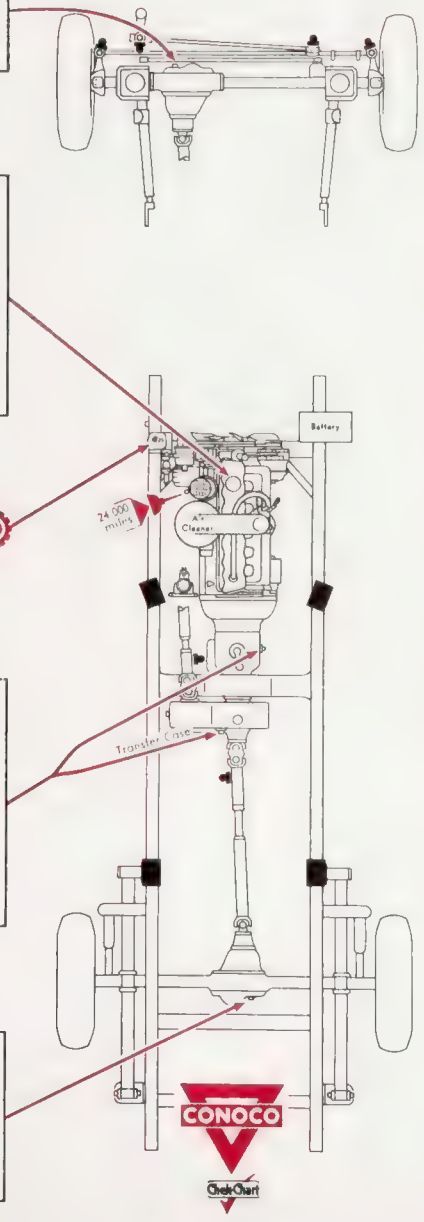
Drain and refill: Every 24,000 miles

REAR AXLE

Heavy-Duty (4½ pts.) Others (5 pts.)
(Also includes Limited-Slip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



SPECIAL SERVICES

AIR CLEANER—OIL BATH TYPE

Clean base every 6000 miles. Fill to level mark with CONOCO Super MOTOR OIL SAE No. 30, Summer; SAE No. 20W, Winter.

AIR CLEANER—THERMACTOR AIR PUMP FILTER

(California cars only) Replace air filter every 12,000 miles. Remove front cover of air chamber.

CRANKCASE VENTILATOR VALVE

Install new valve every 6000 miles. Disassemble and clean all parts.

FUEL FILTER

Replace fuel filter when engine runs rough at cruising speed.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

SPRINGS

Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS

Every 36,000 miles. See General Instructions.

GAS TANK: 14½ gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22HF	45
	24F	55
	27HF	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
All 155-195
Maximum variation between cylinders, 20 psi

SPARK PLUGS

Autolite BF82
Gap: .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS

FoMoCo
Gap: New points .025" or 40 dwell
Dwell angle: 37 -42

CONDENSER

FoMoCo
Capacity: .21-.25 mfd

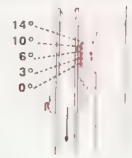
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6 *: California cars with Thermactor, TDC*
* For high altitudes or optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5 over normal setting. To eliminate detonation, never retard initial advance beyond 2 BTDC

FUEL PUMP

AC mechanical
Pressure: 4-6 lb. at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

FORD	Idle Mixture (initial turns)
1-bbl.	1½
1-bbl.*	1-1½

* California cars with Thermactor

ENGINE IDLE SPEED

575-600 rpm*
California cars with Thermactor, 625-650 rpm*
* With headlights turned ON and carburetor air cleaner removed

VALVE CLEARANCES

Intake .018"; exhaust .018"

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than halfway, the need for service is indicated

Adjust the brakes as follows

1. Using a suitable tool inserted into backing plate adjusting slot, expand shoes until a moderate drag is felt when turning wheel
2. Back off adjustment 6 notches to permit wheel to rotate freely
3. Repeat procedure at each wheel

Bleeding sequence: RR, LR, RF, LF

FORD MUSTANG SIX, V-8—1965-'66

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22HF	45
	24F	55

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

6-cyl. 155-195

V-8 ..... 130 170

Maximum variation between cylinders, 20 psi

SPARK PLUGS

Autolite

6-cyl., BF82; V-8, High Perf., BF32; Others, BF42

Gap: BF32, .028"-.032"; BF82, BF42, .032"-.036"

Torque: 15-20 ft. lb.

IGNITION POINTS

FoMoCo

Gap: 6-cyl., New points .025" or 40° dwell; V-8, New single points .017" or 28° dwell
6-cyl., Used points set by dwell only to 40°
V-8 Used single points set by dwell only to 28°
Dual points, each set .020"

Dwell angle: 6-cyl., Dwell angle: 37°-42°; V-8, Single points 26°-31°, Dual points, total 30°-33°; each set with equal dwell

CONDENSER

FoMoCo

Capacity: .21-.25 mfd

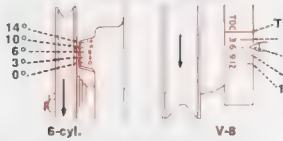
Cylinder Numbering Sequence

Firing Order: 6-cyl., 1, 5, 3, 6, 2, 4
V-8, 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor as necessary to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6-cyl., Manual Trans.: 6°**; California cars with Thermactor, TDC, Auto. Trans.: 12°**; California cars with Thermactor, TDC
V-8, High Performance, 12°*
Others, 6°*; California cars with Thermactor, TDC
*If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC
**For high altitudes or optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. To eliminate detonation, never retard initial advance beyond 2° BTDC

FUEL PUMP

AC mechanical

Pressure: All 6-cyl., 4-6 lb.; V-8, 1965, 6 lb.; V-8, 1966, 4-6 lb.; at 500 rpm

Volume: 1 pint in 6-cyl., 30 seconds, V-8, 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

FORD	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
All 1-bbl.	1-1½	1 lean***	index
1965 2-bbl.	1½	2 rich*	2 rich
4-bbl.	1-1½	2 rich**†	2 rich†
1966 2-bbl.	1-1½	index	2 rich
4-bbl.	1-1½	2 rich†	2 rich†

*C5ZF A & -G, index
**C4GF-AE, index
***1965, C5OF-E, 2 lean
†289 High Perf., manual choke

ENGINE IDLE SPEED

Manual Trans.: High Perf, 750-775 rpm*; others 575-600 rpm*; 6-cyl., California cars with Thermactor, 625-650 rpm*

Auto. Trans.: 6-cyl., 500-525 rpm*; V-8, 475-500 rpm*; 6-cyl., California cars with Thermactor 550-575 rpm*; in DRIVE

With air conditioning, as listed above but with unit turned ON and in operation for 20 minutes

* With headlights turned ON, carburetor air cleaner removed and, when so equipped, idle compensator valve held closed

VALVE CLEARANCES

(engine hot and running)

V-8, High Performance engine: Intake .018"; exhaust .018"

Others: Hydraulic lifters

BRAKE ADJUSTMENT

If equipped, front disc brakes require no adjustment. Replace pads when shoe and lining is .195" thick

Self-adjusting brakes are used. Adjustment is not normally required.

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

CRANKCASE

Six (3½ qts.) V-8 (4 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

Repack front suspension and pitman arm stud every 36,000 miles or 36 months. CAUTION: Apply sparingly. Steering linkage, sealed—no service. If looseness is evident, refer to Authorized Agency. See General Instructions

COOLING SYSTEM: Six 8½ qts. V-8 14 qts. (with heater add 1 qt.)

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube. Early V-8 models with air conditioning maintain level to ¾" to 1" from top of reservoir

DISTRIBUTOR OIL CUP

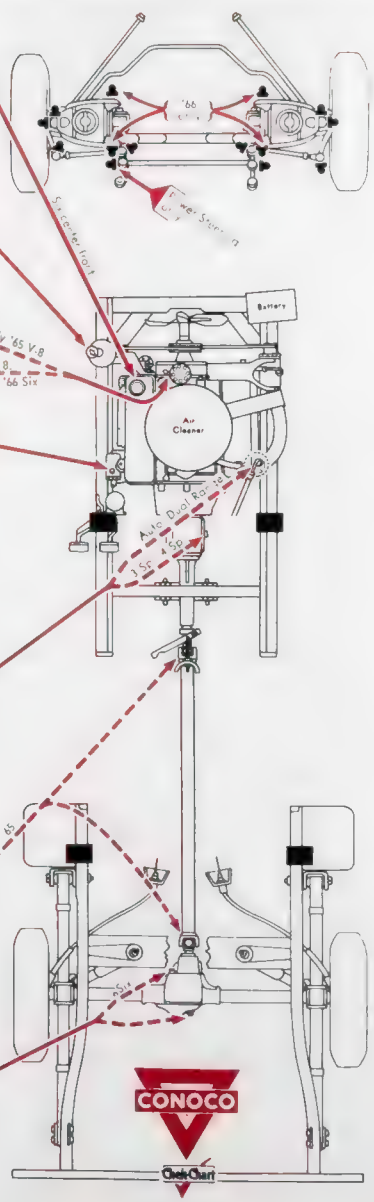
Every 12,000 miles

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to right and fill. With power brakes, fill thru upper cap screw hole, with steering wheel centered



TRANSMISSION

3-Speed: Six (2 pts.) V-8 (3½ pts.)
4-Speed: Six (4½ pts.)
V-8 Warner (3½ pts.) Ford (4 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

AUTOMATIC DUAL RANGE (Code 6)

Six (7½ qts.) V-8 (8½ qts.)

Dry capacities. Fill to full mark

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

Every 36,000 miles or 36 months. Remove and replace plug

Special adapter required

REAR AXLE

Six (2½ pts.) V-8 289 cu. in., 271 hp engine (5 pts.) Others (4½ pts.)

(Also includes Limited-Slip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles

AIR CLEANER—THERMACTOR AIR PUMP FILTER

California cars ..... Replace air pump filter every 12,000 miles

CRANKCASE VENTILATOR VALVE

When equipped ... valves except jiggle pin type ... and all parts ... new valve ... parts

FUEL FILTER

... filter: every 12,000 ... 66)

OIL FILTER

Replace oil filter element at least every ... miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions

AIR CONDITIONING UNIT

Refer servicing to Authorized Agency.

SPRINGS

Equipped with friction inserts. Do not lubricate.

GAS TANK: 16 gals.

'JEEP' WAGONEER SIX—1966 V-8 SERIES J-100—1965-'66 (2WD and 4WD)

KEY

- Conoco Super Lube
- (TA) Conoco Automatic Transmission Fluid Type A
- Positions For Frame Engaging Lift Adapters
- (SG) Conoco Steering Gear Grease
- Service From Under Hood

FRONT AXLE (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

Drain and refill: Every 30,000 miles

Lubricate steering linkage: 2WD every 30,000 miles, 4WD, 12,000 miles. Lubricate king pins every 6000 miles

FRONT AXLE UNIVERSAL JOINTS

Every 6000 miles. Remove plug and fill. Every 30,000 miles disassemble, clean and repack

STEERING GEAR (SG)

Every 6000 miles. Remove cap screw and check level. Reach from under radiator

POWER STEERING RESERVOIR (TA)

Every 6000 miles. Check level. Maintain level to 1" from top of reservoir

CRANKCASE (4 qts.)

Drain and refill: 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

TRANSMISSION (2¾ pts.) TRANS. WITH OVERDRIVE (3 pts.)

Individual drain and fill plugs. Fill overdrive first, then transmission

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

Drain and refill: Every 30,000 miles

TRANSFER CASE (3¼ pts.)

Individual drain and fill plugs

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

Drain and refill: Every 30,000 miles

AUTOMATIC TRANS. (3¾ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

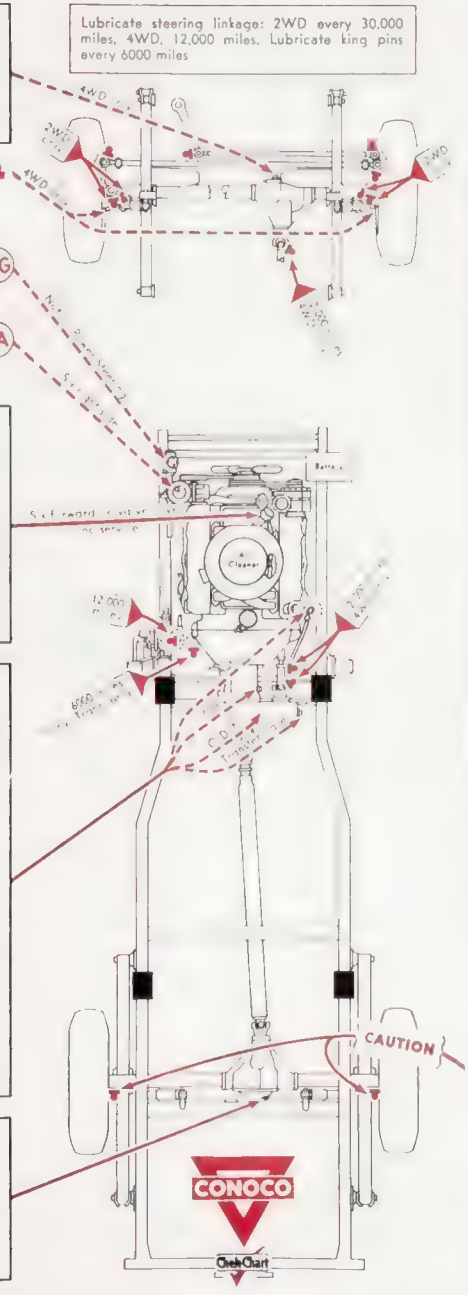
REAR AXLE (3 pts.)

(Also includes Powr-Lok axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

Drain and refill: Every 30,000 miles



COOLING SYSTEM: Six 9½ qts. V-8 18½ qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—OIL BATH TYPE

Clean base every 4000 miles. Fill to level mark with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

CRANKCASE VENTILATOR VALVE

Install new valve every 4000 miles. Also clean hose to carburetor and air cleaner.

FUEL FILTER

V-8 fuel filter in fuel line replace every 12,000 miles. Six replace filter element, top of fuel pump right side rear, every 12,000 miles

OIL FILTER

Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

SPRINGS

Equipped with friction inserts. Do not lubricate

UNIVERSAL JOINTS

Every 30,000 miles (2WD), 12,000 miles (4WD). See General Instructions.

REAR WHEEL BEARINGS

Every 30,000 miles. CAUTION: Apply lubricant sparingly until it appears at vent hole above fitting

GAS TANK: 18 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
6-cyl.	24H	50
V-8, opt. 6-cyl.	24H	60

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

All ..... minimum 145

SPARK PLUGS

Champion: 6-cyl., N-14Y; V-8, H-14Y
Gap: .033"-.037" (.035" preferred)
Torque: 25-30 ft. lb.

IGNITION POINTS

Delco
Gap: .016"
Dwell angle: 6-cyl., 31°-34°; V-8, 28°-32°

CONDENSER

Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order:
6-cyl. 1, 5, 3, 6, 2, 4
V-8 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Set idle speed with transmission in NEUTRAL
5. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
6. Reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
5° (Regular fuel); 8° (Premium fuel)
V-8 with 4-bbl., 5° (Premium fuel)

FUEL PUMP

Carter model: 6-cyl., MF-3805S; V-8, M-4068S
Pressure: 4-5½ lb. at 500 rpm
Volume: 1 quart in 1 minute or less at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
1-bbl. RBS	¼*-1¼	index	index
HOLLEY			
2-bbl. 2209	½-1½	index	index
4-bbl. 4160	½-1½	1 lean	1 lean

* Auto. Trans., ¾

ENGINE IDLE SPEED

Manual Trans. 550 rpm
Auto. Trans.: 6-cyl., 550 rpm; V-8, 500 rpm in NEUTRAL
Air Cond. 500 rpm in NEUTRAL with unit turned ON

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated

Adjust the brakes as follows:
1. Using a suitable tool inserted into adjustment opening, turn star wheel adjuster until shoes are tight against drum
2. Back off adjustment until drum just turns freely without drag
3. Repeat procedure at each wheel

Bleeding sequence: LR, RR, RF, LF

'Jeep' SIX — 'WAGONEER' SERIES J-100—1963-'66

(4 x 4, 4 x 2 Station Wagon, Panel Delivery) (Formerly Willys)

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24H	50, 60, 70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
All 145-155
Variations should not exceed 15 psi

SPARK PLUGS

Champion L-12Y
Gap: .030"
Torque: 28-30 ft. lb

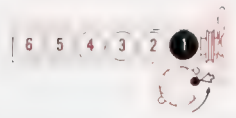
IGNITION POINTS

Autolite
Gap: .020"
Dwell angle 38

CONDENSER

Autolite
Capacity: .25-.28 mfd

Cylinder Numbering Sequence

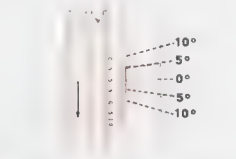


Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line at carburetor and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 5

FUEL PUMP

Carter model M-3561S
Pressure: 3½-5½ lb. at 1800 rpm
Volume: 1 pint in 30 seconds or less at idle speed

CARBURETOR ADJUSTMENT

HOLLEY	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl.	½	index	index
2-bbl.	½	index	index

ENGINE IDLE SPEED

590-600 rpm

VALVE CLEARANCES

(engine cold, not running)
Intake .008"; exhaust .008"

BRAKE ADJUSTMENT

With brakes cold, if brake pedal can be depressed more than 2", need for service is indicated

Adjust the brakes as follows:

1. Early models have two adjustment cams on each backing plate; turn cam until drum cannot be turned by hand. Others, using a suitable tool inserted into adjustment opening, turn star wheel adjuster until shoes are tight against drum
2. Back off adjustment until drum just turns freely without drag. Early models, repeat steps 1 and 2 for other adjustment cam
3. Repeat procedure at each wheel

Bleeding sequence: LR, RR, RF, LF

KEY

- Conoco Super Lube
- Conoco Automatic Transmission Fluid Type A (TA)
- Service From Under Hood
- Conoco Universal Gear Lubricant SAE No. 90 (90)
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Steering linkage, all models (7 or 8 fittings) lubricate 4x2 every 30,000 miles, 4x4, 12,000 miles. Independent front suspension (2 fittings) lubricate 4x2 every 30,000 miles, 4x4, 12,000 miles. Solid front axle king pins (4 fittings) lubricate every 6000 miles.

INDEPENDENT SUSPENSION CENTER UNIVERSAL JOINT

Every 30,000 miles. Loosen inner end of boot and pull back to reach fitting. Reassemble boot

FRONT AXLE UNIVERSAL JOINTS

Every 6000 miles. Remove plug and fill. Every 30,000 miles disassemble, clean and repack

DISTRIBUTOR RESERVOIR

Every 30,000 miles. Remove plug and fill

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

POWER STEERING RESERVOIR (TA)

Every 6000 miles. Check level. Maintain level to bottom of filler neck

CRANKCASE (5 qts.)

Drain and refill: 6000 miles
See Page 1 for exception

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash screen, inside valve cover below fill cap, in kerosene, dry and recoil with crankcase grade

STEERING GEAR (90)

Every 6000 miles. Remove plug and fill

TRANSMISSION

4x2 Models (2¾ pts.) 4x4 Models (2½ pts.)
4x2 Models add ½ pt. thru plug hole at rear of housing extension to lubricate rear bearing

TRANS. WITH OVERDRIVE (3 pts.)

Individual drain and fill plugs. Fill overdrive first, then transmission

TRANSFER CASE (3¼ pts.)

Individual drain and fill plugs

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Drain and refill: Every 30,000 miles

AUTOMATIC TRANS. (8½ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 30,000 miles. See General Instructions

REAR WHEEL BEARINGS

Every 30,000 miles. CAUTION: Apply lubricant sparingly until it appears at vent hole above fitting

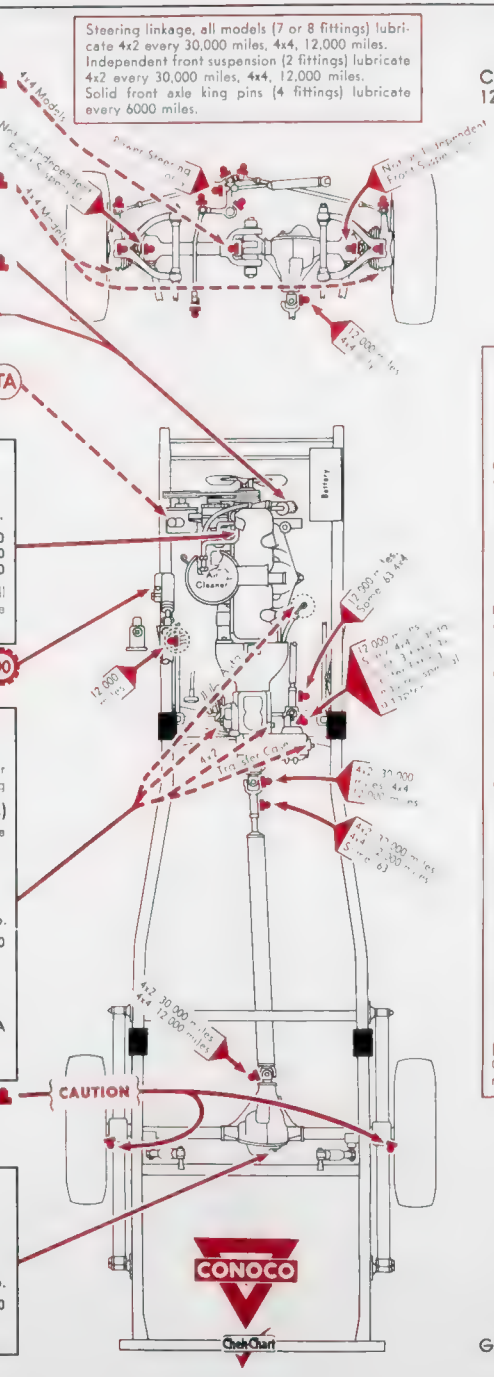
FRONT AXLE (2½ pts.)
4x4 Models only

REAR AXLE (3 pts.)
(Also includes Powr-Lok axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

Drain and refill: Every 30,000 miles



COOLING SYSTEM: 11 qts. (with heater 12 qts.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE

Clean base every 6000 miles. Fill to level mark with 1¼ pts. CONOCO Super MOTOR OIL (crankcase grade)

CRANKCASE VENTILATOR VALVE

Disassemble and clean every 6000 miles

CRANKCASE BREATHER

Every 6000 miles clean screen inside breather pipe in kerosene, dry and recoil with CONOCO ALL-SEASON Super MOTOR OIL (crankcase grade)

FUEL FILTER

Clean fuel filter screen every 12,000 miles

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

OVERDRIVE CONTROL CABLE

(4x2 Models) Every 12,000 miles. Refer servicing to Authorized Agency.

SPRINGS

Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINT SPLINE

(Models without fittings) Repack spline with CONOCO SUPER LUBE M, 4x2 every 30,000 miles; 4x4 every 12,000 miles.

GAS TANK: 18 gals.

LINCOLN CONTINENTAL 1966

KEY

- Conoco Super Lube M
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

Repack front suspension and steering linkage every 36,000 miles or 36 months. CAUTION: Apply sparingly. See General Instructions

COOLING SYSTEM: 25 qts.

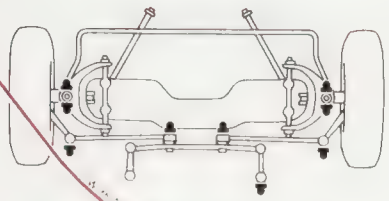
CRANKCASE (5 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filter cap element in kerosene, dry and recoil with crankcase grade. Models with Thermactor system no service



POWER STEERING RESERVOIR (TA)

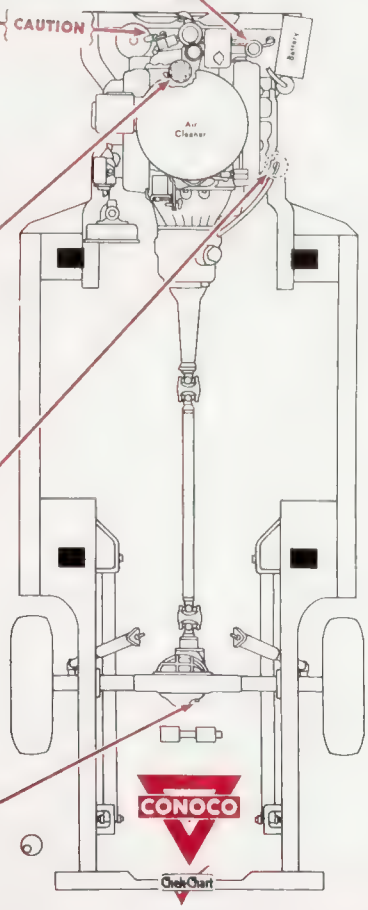
CAUTION

Every 6000 miles or 6 months. Check fluid level with dipstick. Maintain level to "F" mark

CAUTION: Filter element in reservoir, do not damage

DISTRIBUTOR CAM CENTER

Every 12,000 miles or 12 months. Under rotor—4 drops on wick



TURBO-DRIVE

(13¼ qts. dry capacity. Fill to full mark)

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

Limited-Slip (5¼ pts.) Others (5½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—THERMACTOR AIR PUMP FILTER
(California cars only) Replace air pump filter every 12,000 miles.

CRANKCASE VENTILATOR VALVE
Install new valve every 6000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES
SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
HYDRO-LECTRIC MECHANISM
POWER BRAKES
Refer servicing to Authorized Agency.

GAS TANK: 25 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	27F	85

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
All	160-200

Maximum variation, 20 psi

SPARK PLUGS
Autolite BTF 42
Gap: .032"-.036"
Torque: 15-20 ft. lb.
Do not use gasket on tapered seat plugs

IGNITION POINTS
FoMoCo
Gap: New points .017" or 28° dwell. Used points set by dwell only to 28
Transistor ignition: New points .019"-.021" or 23° dwell. Used points set by dwell only to 23
Dwell angle: 26 -31°. Transistor ignition, 22 -24

CONDENSER
FoMoCo
Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center): 10°*
* If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2 BTDC

FUEL PUMP
Carter mechanical
Pressure: 4½-6½ lb. at 500 rpm
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Auto. Trans.
CARTER 4-bbl.	1½	1 rich

ENGINE IDLE SPEED
450-475 rpm* in DRIVE; California cars with Thermactor, 500-525 rpm* in DRIVE; cars with air conditioning, 500-525* rpm in DRIVE with unit turned OFF
* With headlights turned ON, carburetor air cleaner removed and idle compensator valve, when so equipped, held closed. Remove vacuum line from power unit of parking brake assembly and plug line to keep brake engaged

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Front disc brakes require no adjustment
Self-adjusting brakes are used at rear. Adjustment is not normally required
Bleeding sequence: RR, LR, RF, LF

LINCOLN CONTINENTAL 1961-'65

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	27F	80

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

All 160-200

Max. variation: 1961-63, 10 psi, 1964-65, 20 psi

SPARK PLUGS

Autolite BF42
Gap: .032"-.036"
Torque: 1961-63, 20 ft. lb.; 1964-65, 15-20 ft. lb.

IGNITION POINTS

FoMoCo
Gap: New points .017" or 28° dwell
Used points set by dwell only to 28°
Dwell angle: 26°-31°

CONDENSER

FoMoCo
Capacity: .21-.25 mfd

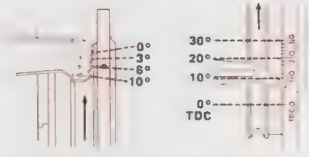
Cylinder Numbering Sequence

Firing Order: 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



1961-63 1964-65

Timing Setting (Before Top Dead Center):
1961, 6° (Allowable range, 2°-10°)
1962, 8° (Allowable range, 2°-13°)
1963, 4° (Allowable range, 2°-4°)
1964-65, 6°*

* If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC

FUEL PUMP

AC mechanical
Pressure: 4½-6½ lb. at 500 rpm
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

CARTER	Idle Mixture (initial turns)	Choke (notches) Auto. Trans.
2-bbl. ABD	1-1½	index*
4-bbl.	1½	1 rich

* 1962-63, 1 rich

ENGINE IDLE SPEED

450-475 rpm* in DRIVE

Air Cond.: 1961, early 1962, set idle to 450-475 rpm in DRIVE with unit turned OFF, then set idle to 900 rpm with idle compensator held ON

Late 1962-65*, set idle to 450-475 rpm in DRIVE with unit turned ON and in operation for 20 minutes

On cars equipped with vacuum release parking brake, remove vacuum line from power unit of parking brake assembly and plug line to keep parking brake engaged

* 1965, Headlights ON

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

1965 front disc brakes require no adjustment
Self-adjusting brakes are used. Adjustment is not normally required
Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

CRANKCASE (5 qts.)

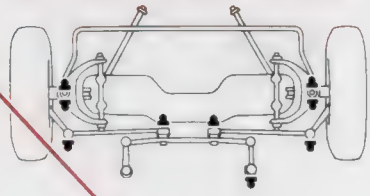
Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

('65, late '64) Wash filler cap element in kerosene, dry and recoil with crankcase grade. ('61-63, early '64) Replace paper element

Repack front suspension and steering linkage: '61-'63 every 30,000 miles or 2 years; '64-'65, 36,000 miles or 3 years. **CAUTION:** Apply sparingly. See General Instructions



POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check fluid level with dipstick. Maintain level to "F" mark

CAUTION: Filter element in reservoir, do not damage

DISTRIBUTOR OIL CUP

'61-'64 only

Every 12,000 miles

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

TURBO-DRIVE (10½ qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

CENTERING YOKE SOCKET AND BALL

'61-'63 every 30,000 miles or 2 years; '64-'65, 36,000 miles or 3 years

Special adapter required

UNIVERSAL JOINTS

'61-'62 every 6000 miles or 6 months; '63, 30,000 miles or 2 years; '64, 36,000 miles or 3 years

CAUTION: Apply sparingly

REAR AXLE (4¾ pts.)

(Also includes Limited-Slip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

COOLING SYSTEM: '61-'64, 25 qts., '65, 22½ qts.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Replace polyurethane element every 12,000 miles

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE

When equipped all valves except jiggle-pin type [illegible] and all [illegible]

FUEL FILTER

Replace fuel filter every 12,000 miles

OIL FILTER

[illegible]

AUTOMATIC TRANSMISSION FILTER

Replace filter at time of transmission drain

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES

Refer servicing to Authorized Agency.

SPRINGS

Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS

'65, every 100,000 miles or 3 years. See General Instructions.

GAS TANK: '61-'63, 21 gals., '64-'65 24 gals.

MERCURY SIX ALL MODELS—1961, MONTEREY—1962

KEY

- Conoco Super Lube M
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

CRANKCASE (4 qts.)

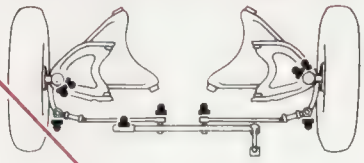
Drain and refill: '62—6000 miles or 6 months
'61—4000 miles or 4 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

Repack front suspension and steering linkage: '61 every 4000 miles; '62, 30,000 miles. CAUTION: Apply sparingly. See General Instructions



COOLING SYSTEM: 15 qts. (with heater 16 qts.)

POWER STEERING RESERVOIR (TA)

Every 6000 miles. Check level. Maintain level to ¼" from top of reservoir

CAUTION: Filter element in reservoir, do not damage

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION (3 pts.)
TRANS. WITH OVERDRIVE (4¼ pts.)

Individual drain plugs, fill through trans. plug

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

CAUTION: Fill slowly. Recheck level after short operation

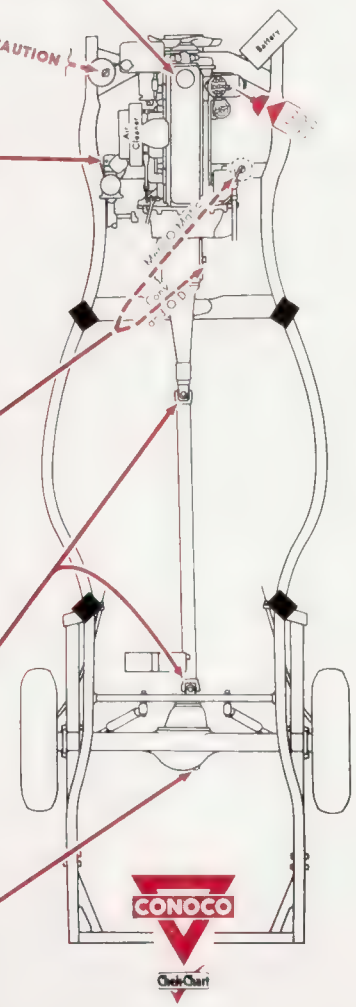
MERC-O-MATIC (9 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

Every 30,000 miles. Remove and replace plug Special adapter required



REAR AXLE (5 pts.)

(Also includes Power Transfer axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 6000 miles

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles ('61); 6000 miles ('62) or more often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES SPEEDOMETER CABLE
See General Instructions

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINT SPLINE
[1961 Merc-O-Matic] Clean, brush approx. 1 oz. CONOCO SUPER LUBE M evenly on splines every 30,000 miles

GAS TANK: 20 gals., '62 Station Wagon 21 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	29NF	55, 65
	27F	70

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
All	130-170

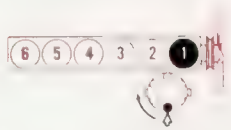
Allowable tolerance between cylinders, 10 psi

SPARK PLUGS
Autolite BTF6
Gap: .032"-.036"
Torque. 20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: New points .025" or 40° dwell
Used points set by dwell only to 40°
Dwell angle: 37°-42

CONDENSER
FoMoCo
Capacity: .21-.25 mfd

Cylinder Numbering Sequence

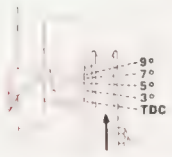


Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 475 rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
Manual Trans.: 1961, 4°; 1962, 6
Auto. Trans.: 1961, 10°; 1962, 12°

FUEL PUMP
AC model: 4874 with electric wipers, 4872 with vacuum wipers
Pressure: 3½-5½ lb. at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
HOLLEY 1-bbl.	1¼

ENGINE IDLE SPEED
Manual Trans. 500-525 rpm
Auto. Trans. 450-475 rpm in DRIVE
With air conditioning, as listed above but with unit turned ON and in operation for 20 minutes

VALVE CLEARANCES
Mechanical self-adjusters

BRAKE ADJUSTMENT

Self-adjusting brakes are used. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, adjust the brakes as follows:

Note: If frame contact hoist is used, disconnect parking brake cable

1. Expand shoes until a slight drag is felt when turning drums
2. Remove brake drums
3. Hold adjusting lever away from adjusting screw, and back off the adjusting screw ¾ of a turn
4. Reinstall drums and wheels
5. Operate car in reverse and make 5 or 6 brake applications to bring the shoes into proper adjustment
6. Reconnect parking brake cable and adjust

Bleeding sequence: RR, LR, RF, LF

1962 Power brakes: Master cylinder, RR, LR, RF LF, master cylinder

MERCURY COMET—1960-'62

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22NF	40
	24F	55

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All 150-190
Maximum variation between cylinders, 10 psi

SPARK PLUGS
Autolite BF82
Gap: .032"-.036"
Torque: 20 ft. lb.

CONDENSER
FoMoCo
Capacity: .21-.25 mfd

IGNITION POINTS
FoMoCo
Gap: New points .025" or 40° dwell
Used points set by dwell only to 40°
Dwell angle: 37°-42°

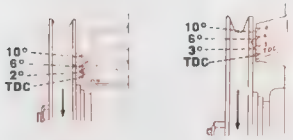
Cylinder Numbering Sequence

Firing Order: 1, 5 ,3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
Manual Trans. 1960, 2°; 1961-62, 4° (Allowable range, 2°-9°)
Auto. Trans. 10° (Allowable range, 2°-15°)

FUEL PUMP
AC mechanical
Pressure: 3½-5½ lb. at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

HOLLEY	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl. 1904	1-1½	manual	manual
1-bbl. 1908	1-1½	index	index
1-bbl. 1909	1-1½	index	index

ENGINE IDLE SPEED
1960-61: Manual Trans. 500-525 rpm
Auto. Trans. 475-500 rpm in DRIVE
1962: Manual Trans. 500-550*
Auto. Trans. 475-525 rpm**
With air conditioning, as listed above but with unit turned ON and in operation for 20 minutes
* With smog reduction, 550-600 rpm
** With smog reduction, 525-575 rpm

VALVE CLEARANCES
(engine hot and running)
Intake .016"; exhaust .016"

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than halfway, the need for service is indicated

Adjust the brakes as follows:

1. If frame contact lift is used, disconnect parking brake at equalizer
2. Using suitable tool inserted into adjustment opening, turn star wheel adjuster until a slight drag is felt while turning wheel
3. Back off the adjustment until the drum turns freely without drag
4. Repeat procedure at each wheel
5. Reconnect parking brake cable and adjust

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- SG Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

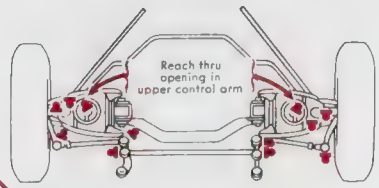
CRANKCASE (3½ qts.)

Drain and refill: '62—6000 miles or 6 months
'60-'61—4000 miles or 4 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

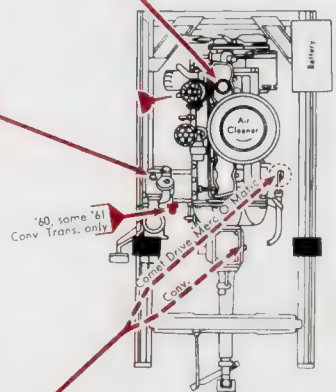
Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade



STEERING GEAR SG

Remove plug, turn wheels to right and fill. With power brakes, fill thru upper cap screw hole, with steering wheel centered



TRANSMISSION (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

'60-'61 COMET DRIVE (6¼ qts.)
'62 MERC-O-MATIC (6¼ qts.)

Conoco Automatic Transmission Fluid Type A

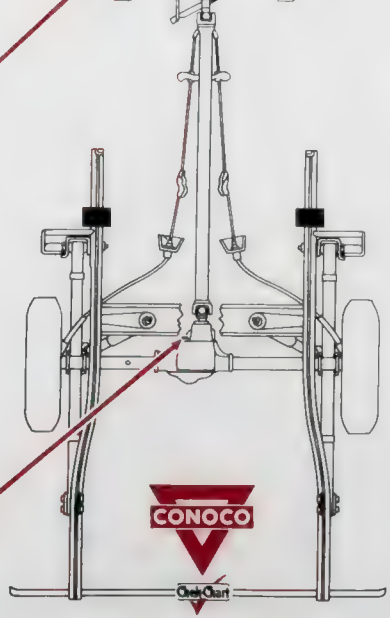
Drain and refill: '60 every 24,000 miles. See General Instructions

REAR AXLE

'60-'61 (2 pts.) '62 (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



COOLING SYSTEM: '60-'61, 8½ qts., '62, 8¾ qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 10,000 miles.

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 5000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Every 24,000 miles. See General Instructions.

UNIVERSAL JOINT SPLINE
(1960-'61 Automatic Trans.) Clean, brush approx. 1 oz. CONOCO SUPER LUBE M evenly on splines every 24,000 miles.

GAS TANK: 14 gals.

MERCURY SIX METEOR—1962-'63

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Repack front suspension and steering linkage 62 every 30,000 miles; '63, 36,000 miles. CAUTION: Apply sparingly. See General Instructions

CRANKCASE (3½ qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)

Every 6000 miles. Check level with dipstick
Maintain level to "F" mark on gage

CAUTION: '63 filter element in reservoir, do not damage

STEERING GEAR (SG)

Every 12,000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

MERC-O-MATIC

(7½ qts. dry capacity. Fill to full mark)

Conoco Automatic Transmission Fluid Type A

See General Instructions

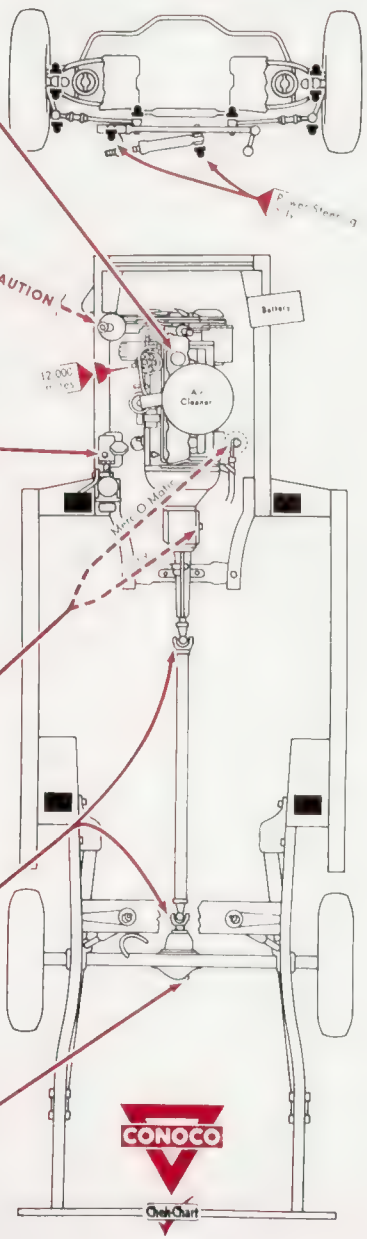
UNIVERSAL JOINTS

'62 every 30,000 miles; '63, 36,000 miles.
Remove and replace plug
Special adapter required

REAR AXLE (4½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



COOLING SYSTEM: 8½ qts. (with heater 9½ qts.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE
62, late '63 when equipped, all valves except iggle-pin type, disassemble and clean valve and all parts every 6000 miles. Jiggle-pin type, install new valve every 6000 miles and clean all other parts. Early '63 clean tube and separator every 12,000 miles

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES
SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
HYDRO-LECTRIC MECHANISM
POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings.

GAS TANK: 16 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22NF	40
	24F	55

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
All	150-190

Allowable tolerance between cylinders, 10 psi

SPARK PLUGS
Autolite BF82
Gap: .032"-.036"
Torque: 20 ft. lb

IGNITION POINTS
FoMoCo
Gap: New points .025" or 40° dwell
Used points set by dwell only to 40°
Dwell angle: 37°-42

CONDENSER
FoMoCo
Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center)
1962: Manual Trans. 4° (Allowable range, 2°-9°)
Auto. Trans. 10 (Allowable range, 2°-15°)
1963: Manual Trans. 6 (Allowable range, 2°-11°)
Auto. Trans. 12 (Allowable range, 2°-17°)
200 eng. 10 (Allowable range 2°-15°)

FUEL PUMP
AC mechanical
Pressure: 3½-5½ lb. at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
FORD 1-bbl.	1-1½	index	index
HOLLEY 1-bbl.	1½	index	index

ENGINE IDLE SPEED
Manual Trans. 500-550 rpm*
Auto. Trans. 475-525 rpm** in DRIVE
With air conditioning, as listed above but with unit turned ON and in operation for 20 minutes
* 1962: With smog reduction, 550-600 rpm
** 1962: With smog reduction, 525-575 rpm

VALVE CLEARANCES
(engine hot and running)
1962: Intake .016", exhaust .016"
1963: Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes are used. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, adjust the brakes as follows:

Note: If frame contact hoist is used, disconnect parking brake cable

1. Expand shoes until a slight drag is felt when turning drums
2. Remove brake drums
3. Hold adjusting lever away from adjusting screw, and back off the adjusting screw ¾ of a turn
4. Reinstall drums and wheels
5. Operate car in reverse and make 5 or 6 brake applications to bring the shoes into proper adjustment
6. Reconnect and adjust parking brake cable

Bleeding sequence: RR, LR, RF, LF

Power brakes: Master cylinder, RR, LR, RF, LF, master cylinder

MERCURY V-8 ALL MODELS—1961, MONTEREY—1962-'63 MONTEREY, MONTCLAIR, PARKLANE—1964

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
Manual Trans.	29NF	55
Auto. Trans.	29NF	65
	27F	70

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
292 engine	140-180
352, 390, 406, 427 engines	160-200
1964 390 4-bbl. engine	170-210

Max. variation: 1961-63, 10 psi, 1964, 20 psi

SPARK PLUGS
Autolite: 292 eng. BF82; 352, 390 engs. BF42; 390 Super and Police, 406, 427 engs. BF32
Gap: .032"-.036"
Torque: 1961-63, 20 ft. lb.; 1964, 15-20 ft. lb.

IGNITION POINTS FoMoCo
Gap: New single points .017" or 28° dwell
Used single points set by dwell only to 28
Dual points, each set 1961-63 .018"-.022", 1964 .019"-.021"
Dwell angle: Single points 26°-31
Dual points, total 1961-63 32°-34°, 1964 33°-36°; each set with equal dwell

CONDENSER
FoMoCo Capacity: .21-.25 mfd

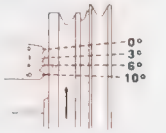
Cylinder Numbering Sequence

292 eng. 352, 390, 406, 427 engs.

Firing Order: 292 engine **1, 5, 4, 8, 6, 3, 7, 2**
352, 390, 406, 427 engines **1, 5, 4, 2, 6, 3, 7, 8**

TIMING PROCEDURE
Follow procedure listed on page 73

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
1961: Manual Trans. 3°; Auto. Trans. 292 eng. 10°; 352, 390 engines 6° (All, range, 2°-10°)
1962: Manual Trans. 5°; Auto. Trans. 292 eng 12°; 352, 390 engs. 8°; 406 eng. 8° (Min. 2°)
1963: 390 eng. 6° (Allowable range, 2°-11°); 390 Super eng. Manual Trans. 5° (Allowable range, 2°-10°), Auto. Trans. 8° (Allowable range, 2°-11°); 406, 427 engs. 8° (Allowable range, 2°-8°)
1964: 390 2-bbl. eng. 6°*; 390 4-bbl. eng. Manual Trans. 4°*, Auto. Trans. 6°*; 427 eng. 8°**

* For optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. Do not retard initial advance beyond 2° BTDC
** If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC

FUEL PUMP
AC mechanical
Pressure: 1961-63, 292, 352, 390 engs. 4-6 lb.; 406, 427 engs. 5½-6½ lb.; 1964, 390, 427 engs. 4½-6½ lb.; at idle rpm
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
FORD			
2-bbl.	1½	index	2 lean
4-bbl. 1961-63	1½	—	2 lean
1964 390 eng.	1-1½	1 rich*	1 rich*
HOLLEY			
2-bbl. (Primary)	1-1¼	index	—
(Secondary)	¾-1¼	—	—
4-bbl.	1-1½	index	—

* 390 Police, 1 lean

ENGINE IDLE SPEED
Manual Trans.: 575-600 rpm*
Auto. Trans.: 1961-63, 450-475 rpm**; 1964, 475-500 rpm†; in DRIVE
With air conditioning, as listed above but with unit turned ON and in operation for 20 minutes
* 1963, 406, 427 engs. 700 rpm; 1964, 427 eng. 700-800 rpm
** 390 eng. 475-500 rpm † 390 Police, 550-575 rpm

VALVE CLEARANCES
(engine cold, not running)
292 engine: Intake .019"; exhaust .019"
(engine hot and running)
390 Police, 406, 427 engines
Intake .025"; exhaust .025"
352, 390 engines: Hydraulic lifters

BRAKE ADJUSTMENT
Self-adjusting brakes are used. Adjustment is not normally required.
Bleeding sequence: RR, LR, RF, LF
1962 Power brakes: Master cylinder, RR, LR, RF, LF, master cylinder

KEY

- Conoco Super Lube M
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

CRANKCASE (5 qts.)
Drain and refill: '62-'64—6000 miles or 6 mos
61—4000 miles or 4 mos
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

Repack front suspension and steering linkage: 61-'62 every 30,000 miles; '63-'64, 36,000 miles
CAUTION: Apply sparingly. See General Instructions

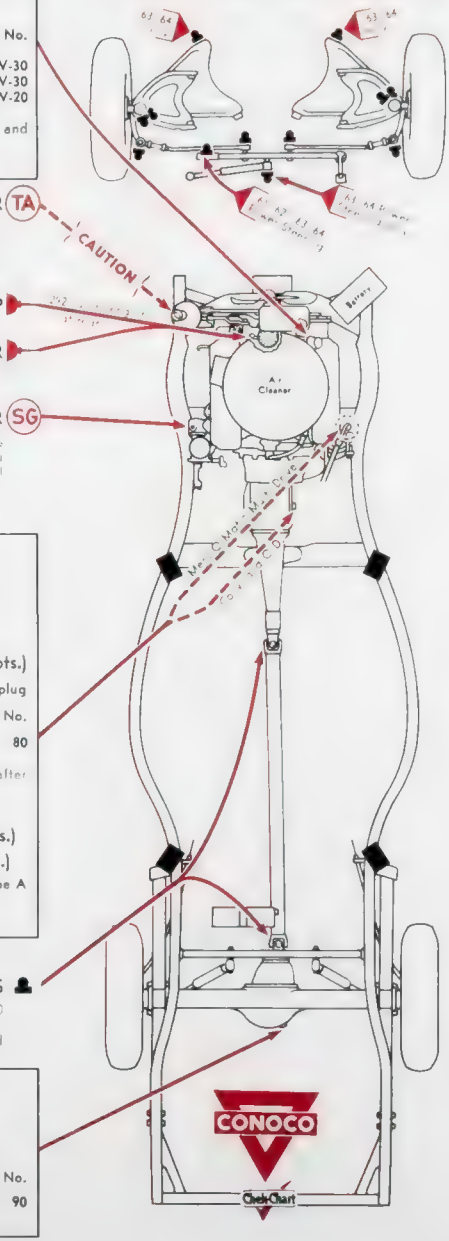
COOLING SYSTEM: 19 qts. (with heater 20 qts.)

POWER STEERING RESERVOIR (TA)
Every 6000 miles. Check fluid level with dip stick. Maintain level to "F" mark on gage
CAUTION: '63-'64 filter element in reservoir, do not damage

DISTRIBUTOR OIL CUP
Every 12,000 mile

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops or wick

STEERING GEAR (SG)
Every 6000 miles. Remove plug, turn wheels to left and fill. With power brakes fill thru lower cap screw hole, with steering wheel centered



TRANSMISSION
3 Speed 292 cu. in. eng., (3 pts.)
3 Speed 352, 390, 406, 427 cu. in. eng (3½ pts.)
4-Speed Warner (3½ pts.)
4-Speed Ford (4 pts.)

TRANS. with OVERDRIVE (4¼ pts.)
Individual drain plugs, fill through trans. plug
Conoco Universal Gear Lubricant SAE No.
All temperatures 80

CAUTION: Fill slowly. Recheck level after short operation

'61-'62 MERC-O-MATIC (9 qts.)
'61-'64 MULTI-DRIVE (10 qts.)
Conoco Automatic Transmission Fluid Type A
See General Instructions

UNIVERSAL JOINTS
'61-'62 every 30,000 miles; '63-'64, 36,000 miles. Remove and replace plug
Special adapter required

REAR AXLE
427 cu. in. engine (5½ pts.)
Others (5 pts.)
(Also includes Power Transfer axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
[illegible] CONOCO [illegible] OIL SAE No. [illegible] reinstall

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE
When equipped, all valves except toggle-pin type, disassemble and clean valve and parts including filter every 60[illegible] pin type, install new valve every 60[illegible] and clean all other parts

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 400[illegible]

FRONT WHEEL BEARINGS
[illegible] repack with CONOCO SUPER [illegible] 12,000 [illegible]

HYDRAULIC BRAKES SPEEDOMETER CABLE
[illegible]

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES
[illegible]

SPRINGS
Equipped with friction inserts. Do not lubricate

SHOCK ABSORBERS
[illegible] Nonrefillable, servicing [illegible]

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINT SPLINE
(1961 Merc-O-Matic, Multi-Drive) Coat spline with 1 oz. CONOCO SUPER LUBE M every 30,000 miles.

GAS TANK: 20 gals., '62-'64 Station Wagon 21 gals.

MERCURY V-8 ALL MODELS EXCEPT COMET—1965-'66

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Repack front suspension and steering linkage every 36,000 miles or 36 months. CAUTION: Apply sparingly. See General Instructions

CRANKCASE

'65 (5 qts.) '66 (4 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION

3-Speed (3½ pts.)
4-Speed Warner (3½ pts.)
4-Speed Ford (4 pts.)

TRANS. WITH OVERDRIVE (4½ pts.)

Individual drain plugs, fill thru trans. plug

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

CAUTION: Fill slowly. Recheck level after short operation

'65-'66 MULTI-DRIVE MERC-O-MATIC (10 qts.)

'66 AUTOMATIC DUAL RANGE (13¼ qts. dry capacity. Fill to full mark)

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

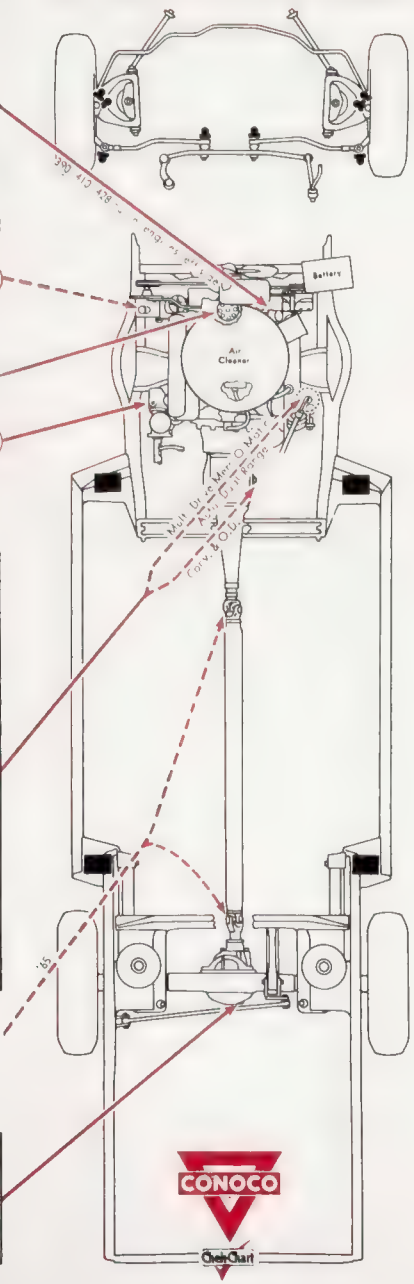
Every 36,000 miles or 36 months. Remove and replace plug
Special adapter required

REAR AXLE

427 cu. in. engine, Limited-Slip (5½ pts.)
Others (5 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90



COOLING SYSTEM: 19½ qts. (with heater 20½ qts.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE

Install new valve every 6000 miles. Disassemble and clean all parts, including filter on 427 cu. in. engine, every 6000 miles.

FUEL FILTER

Replace fuel filter: every 12,000 miles ('65, some '66); as required (other '66).

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES

Refer servicing to Authorized Agency.

GAS TANK: '65, 21 gals., '66, 25 gals. Station Wagon 20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
390 M.T.	22HF	45
A.T., M.T.*	24F	55
390 A.T.*; 410, 427, 428	27HF	70**

* Optional ** 428 and optional on 410, 80

COMPRESSION PRESSURE

(at cranking speed with throttle open)

	psi
390 2-bbl., 427 engines	160-200
390, 410, 428 engines 4-bbl.	170-210

Maximum variation between cylinders, 20 psi

SPARK PLUGS

Autolite: 390 (ex. 330-hp), 410, 428 engs. BF42; 390 (330-hp), 427 engs. BF32
Gap: BF42 .032"-.036"; BF32 .028"-.032"
Torque: 15-20 ft. lb.

IGNITION POINTS

FoMoCo
Gap: New single points .017" or 28° dwell
Used single points set by dwell only to 28
Dual points .019"-.021"
Dwell angle: Single points 26°-31°. Dual points: Transistor ignition, 22°-24°; others, total dwell 30°-33°, each set with equal dwell

CONDENSER

FoMoCo Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor as necessary to obtain recommended setting
7. Reconnect vacuum line, reset idle speed

Timing Mark and Setting

390, 410, 428 engs. 427 eng.

Timing Setting (Before Top Dead Center):

		Thermactor
390 1965	6°*†	—
1966	10°*†	6°†
410, 428	10°†	6°†
427	8°*†	—

* For high altitudes or optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting
† If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC

FUEL PUMP

AC mechanical
Pressure: 4½-6½ lb. at 500 rpm
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
FORD			
390 2-bbl. 1965	1-1½	2 rich	2 rich
1966	1-1½	index	index
4-bbl.	1-1½	index	index
410, 428 4-bbl.	1-1½	2 rich	1 rich
HOLLEY			
427 4-bbl.	1-1½	index	—

ENGINE IDLE SPEED

Manual Trans.: 410, 428, 1965 390 575-600 rpm*; Thermactor 610-635 rpm*; 1966 390 475-500 rpm*; Thermactor 525-550 rpm*
Auto. Trans.: 475-500 rpm*; Thermactor 525-550 rpm*; in DRIVE
With air conditioning, as listed above but with unit turned ON and in operation for 20 minutes
On cars equipped with vacuum release parking brake, remove vacuum line from power unit of parking brake assembly and plug line to keep parking brake engaged
* With headlights turned ON, carburetor air cleaner removed and idle compensator valve, when so equipped, held closed

VALVE CLEARANCES

(engine hot and running)
427 eng.: Intake .025"; exhaust .025"
390, 410, 428 engs.: Hydraulic lifters

BRAKE ADJUSTMENT

1966 front disc brakes require no adjustment. Replace pads when shoe and lining is .195" thick Others, self-adjusting brakes are used. No adjustment is normally required
Bleeding sequence: RR, LR, RF, LF

MERCURY V-8 METEOR—1962-'63

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24F	55, 65

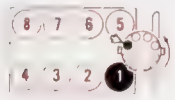
COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All 130-170
Allowable tolerance between cylinders, 10 psi

SPARK PLUGS
Autolite BF42
Gap: .032"-.036"
Torque: 20 ft. lb

CONDENSER
FoMoCo
Capacity: .21-.25 mfd

IGNITION POINTS
FoMoCo
Gap: New points .017" or 28° dwell
Used points set by dwell only to 28
Dwell angle: 26°-31

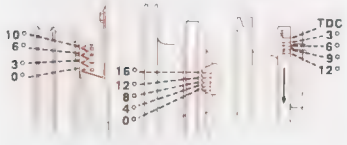
Cylinder Numbering Sequence



Firing Order: 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor as necessary to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



1962 Early 1963 Late 1963

Timing Setting (Before Top Dead Center):
1962: 221 eng. 4° (Allowable range, 2°-5°)
260 eng. 4° (Allowable range, 2°-6°)
1963: 221 engine
Man. Trans. 4° (Allowable range, 2°-9°)
Auto. Trans. 12° (Allowable range, 2°-17°)
260 engine
Man. Trans. 4° (Allowable range, 2°-9°)
Auto. Trans. 10° (Allowable range, 2°-15°)

FUEL PUMP
AC mechanical
Pressure: 4-6 lb. at 500 rpm
Volume: 1 pint in 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

FORD	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1962 2-bbl.	1½	2 lean	2 lean
1963 2-bbl.	1-1½	4 lean	4 lean

ENGINE IDLE SPEED
Manual Trans. 1962, 500-525 rpm*; 1963, 575-600 rpm
Auto. Trans. 475-500 rpm in DRIVE
With air conditioning, as listed above but with unit turned ON and in operation for 20 minutes
* 1962: With smog reduction, 525-575 rpm

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes are used. No adjustment is normally required. If the brakes have been relined or the adjustment disturbed, adjust the brakes as follows:

Note: If frame contact hoist is used, disconnect parking brake cable

1. Expand shoes until a slight drag is felt when turning drums
2. Remove brake drums
3. Hold adjusting lever away from adjusting screw, and back off adjusting screw ¾ turn
4. Reinstall drums and wheels
5. Operate car in reverse, make 5 or 6 brake applications to bring shoes into proper adjustment
6. Reconnect and adjust parking brake cable

Bleeding sequence: RR, LR, RF, LF

Power brakes: Master cylinder, RR, LR, RF, LF, master cylinder

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Repack front suspension and steering linkage: '62 every 30,000 miles; '63, 36,000 miles. CAUTION: Apply sparingly. See General Instructions

CRANKCASE (4 qts.)
Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

COOLING SYSTEM: 13½ qts. (with heater 14½ qts.)

POWER STEERING RESERVOIR (TA)
Every 6000 miles. Check fluid level with dipstick. Maintain level to "F" mark on gage

CAUTION: '63 filter element in reservoir, do not damage

DISTRIBUTOR OIL CUP
Every 12,000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)
Every 12,000 miles. Remove plug, turn wheels to left and fill. With power brakes, fill thru lower cap screw hole, with steering wheel centered

TRANSMISSION (3½ pts.)
TRANS. WITH OVERDRIVE (4 pts.)
Individual drain plugs, fill through trans. plug

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

CAUTION: Fill slowly. Recheck level after short operation

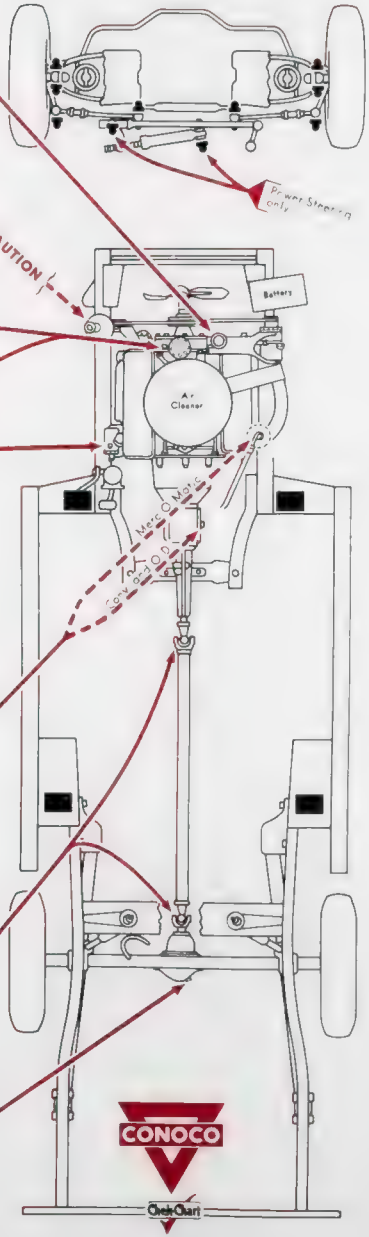
MERC-O-MATIC
(8½ qts.)
Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS
'62 every 30,000 miles; '63, 36,000 miles. Remove and replace plug
Special adapter required

REAR AXLE (4½ pts.)
Conoco Universal Gear Lubricant SAE No.

All temperatures 90



SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE
When engine [illegible] type [illegible] parts in [illegible] miles. [illegible] 6000 miles and [illegible]

FUEL FILTER
Replace fuel filter every 12,000 m[illegible]

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if c[illegible] becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES
SPEEDOMETER CABLE
See General Instructions

AIR CONDITIONING UNIT
HYDRO-LECTRIC MECHANISM
POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS
Sea[illegible]ed type bearings.

GAS TANK: 16 gals.

MERCURY COMET SIX, V-8—1966

KEY

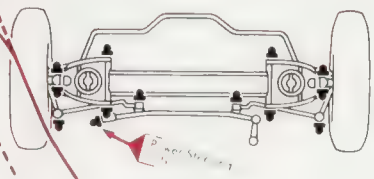
- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

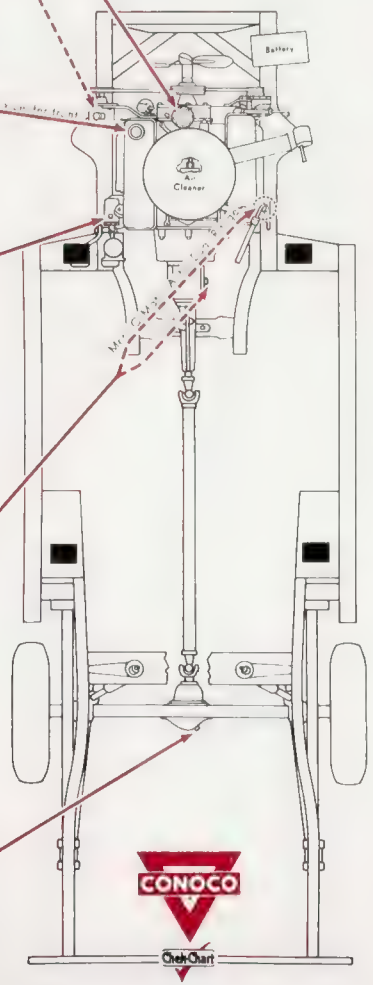
Repack front suspension and pitman arm stud every 36,000 miles or 36 months. CAUTION: Apply sparingly. Steering linkage, sealed—no service. If looseness is evident, refer to Authorized Agency. See General Instructions

DISTRIBUTOR OIL CUP
Every 12,000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

POWER STEERING RESERVOIR (TA)
Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube





CRANKCASE

Six (3½ qts.) V-8 (4 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (SG)
Every 6000 miles. Remove plug, turn wheels to right and fill. With power brakes, fill thru upper cap screw hole, with steering wheel centered

TRANSMISSION

3-Speed: Six (2 pts.) V-8 (3½ pts.)
V-8 4-Speed Warner (3½ pts.)
4-Speed Ford (4 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

MERC-O-MATIC

Six (7¾ qts.) V-8 289 cu. in. eng. (8¾ qts.)

AUTOMATIC DUAL RANGE

V-8 390 cu. in. engine (13¼ qts.)
Dry capacities. Fill to full mark

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

Six, V-8 289 cu. in. engine (4½ pts.)
Limited-Slip (4¼ pts.)
V-8 390 cu. in. engine (5 pts.)
Limited-Slip (4½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

COOLING SYSTEM: Six 8½ qts. V-8 289 cu. in. engine 14 qts. Others 19½ qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—THERMACTOR AIR PUMP FILTER
(California cars only) Replace air pump filter every 12,000 miles.

CRANKCASE VENTILATOR VALVE
Install new valve every 6000 miles.

FUEL FILTER
Replace fuel filter: Cyclone every 12,000 miles; others replace as required.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

GAS TANK: 20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
6-cyl.; V-8 289, 390 MT	22HF	45
	24F	55
	27F	70
390 AT	24F	55
	27F	70

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
6-cyl.	155-195
289 engine	130-170
390 engine	160-200

Maximum variation between cylinders, 20 psi

SPARK PLUGS
Autolite: 6-cyl., BF82; V-8, BF42
Gap: .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: 6-cyl., New points .025" or 40° dwell; V-8, New points .017" or 28° dwell
6-cyl., Used points set by dwell only to 40°; V-8, Used points set by dwell only to 28°
Dwell angle: 6-cyl., 37°-42°; V-8, 26°-31°

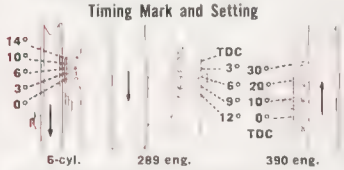
CONDENSER
FoMoCo
Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order: 6-cyl., 1, 5, 3, 6, 2, 4
V-8, 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect tachometer
4. Connect timing light to No. 1 spark plug
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor as necessary to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6-cyl., Manual Trans. 6°†; Auto. Trans. 12°†; California cars with Thermactor, TDC
289 engine
6°*; California cars with Thermactor, TDC*
390 engine
10°*†; California cars with Thermactor, 6°*†

*If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC

†For high altitudes or optimum performance and economy, timing may be advanced up to 5° from recommended setting until engine detonates, then retard just enough to eliminate detonation

FUEL PUMP
6-cyl., AC mechanical; V-8 Carter mechanical
Pressure: 4-6 lb. except 390 eng., 4½-6½ lb.; at 500 rpm
Volume: 1 pint in 6-cyl., 30 seconds, V-8, 20 seconds at 500 rpm

CARBURETOR ADJUSTMENT

FORD	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
6-cyl.			
1-bbl.	1-1½	1 lean	index
289 eng.			
2-bbl.	1-1½	index	2 rich
390 eng.			
2-bbl.	1-1½	index	index
4-bbl.	1-1½	2 rich	1 rich

ENGINE IDLE SPEED

	California cars with Thermactor
6-cyl., Man. Trans. 575-600 rpm*	625-650 rpm*
6-cyl., Auto. Trans. 500-525 rpm*	550-575 rpm*
V-8, Man. Trans. 575-600 rpm*†	610-635 rpm*†
V-8, Auto. Trans. 475-500 rpm*	525-550 rpm*

With air conditioning, as listed but with unit turned ON and in operation for 20 minutes

*With headlights turned ON, carburetor air cleaner removed and, when so equipped, idle compensator valve held closed
†390 eng. 2-bbl. carb., 475 500 rpm*; with Thermactor, 525-550 rpm*

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes are used. Models have metal knockout adjustment access plug in backing plate. Remove plug ONLY if drum cannot be removed in normal manner. Adjust brakes using brake shoe adjustment gage. For final adjustment, operate car in reverse and apply brakes firmly several times

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
6-cylinder 1963-64	22NF	40
V-8 1963-64	24F	55, 65
All 1965	22HF	45

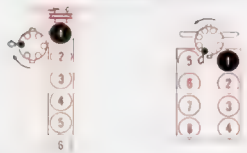
COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
6-cylinder 1963-64 ..... 150-190*
1965 155-195
V-8 ..... 130-170*
* Maximum variation: 1963, 10 psi; 1964 65 20 psi

SPARK PLUGS
Autolite: 6-cyl. BTF82; V-8, BF42; except 289 High Perf. BF32
Gap: .032"-.036" except BF32 .028"-.032"
Torque: 15-20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: 6 cyl., New points, .025" or 40° dwell. Used points set by dwell only to 40°. Dwell angle: 37°-42°. 8 cyl., New single points .017" or 28° dwell. Used single points set by dwell only 28°. Dual points, each set .019"-.021". Dwell angle: Single points 26°-31°. Dual points, total 30°-33°; each set with equal dwell.

CONDENSER
FoMoCo Capacity: .21-.25 mfd

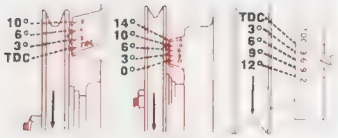
Cylinder Numbering Sequence



Firing Order:
6-cyl. 1, 5, 3, 6, 2, 4 V-8 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



1963 1964-65 V-8
6-cyl.

Timing Setting (Before Top Dead Center):
6-cyl. 1963: 144 eng. M.T. 8°*; A.T. 12°**
1963-64: 170 eng. M.T. 6°*; A.T. 12°*
1964: 200 eng. A.T. 12°*
1965: 200 eng. M.T. 6°*; A.T. 12°*
V-8 1963: M.T. 6° (2°-11°); A.T. 10° (2°-15°)
1964: 260 eng. M.T. 6°**; A.T. 10°**
289 eng. M.T. 6°**; A.T. 8°**
High Performance, 10°**
1965: 289 eng., 6°**; High Performance, 10°
* For optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. Do not retard initial advance beyond 2° BTDC
** If engine requirements or substandard fuels dictate, timing may be retarded from recommended setting to eliminate detonation but not to exceed 2° BTDC

FUEL PUMP
AC mechanical
Pressure: 6-cyl. 1963-64, 3½-5½ lb.; 1965, 4-5 lb. at 500 rpm; V-8, 1963-64, 6 lb.; 1965, 4-6 lb.; at 500 rpm
Volume: 6-cyl. 1 pint in 30 seconds; V-8, 1 pint in 20 seconds; at 500 rpm

CARBURETOR ADJUSTMENT

FORD	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl.	1-1½	index*	index
2-bbl. 1963	1½	4 lean	4 lean
1964-65	1-1½	2 rich**	2 rich
4-bbl. 1964	1-1½	1 lean	3 lean
1965	1½	2 rich***	2 rich

* 1965, C50F-E 2 lean
** C5ZF-A & G, index
*** C4GF-AE, index

ENGINE IDLE SPEED
Man. Trans.: 6-cyl. 1963-64, 500-525 rpm; 1965, 575-600 rpm*; V-8 575-600 rpm
Auto. Trans. in DRIVE: 6 cyl. 144 eng. 500-550 rpm; 170, 200 engs. 500-525 rpm*; V-8 475-500* rpm; except 289 High Performance 700-800 rpm; in DRIVE
With air conditioning, as listed above but with unit turned ON and in operation for 20 minutes
* 1965, Headlights ON

VALVE CLEARANCES
(engine hot and running)
Hydraulic lifters, nonadjustable; except 289 High Performance: Intake .018"; exhaust .018"

BRAKE ADJUSTMENT

Self-adjusting brakes are used. Adjustment is not normally required.
Bleeding sequence: RR, LR, RF, LF

MERCURY COMET SIX, V-8—1963-'65

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Repack front suspension and pitman arm stud every 36,000 miles or 36 months. **CAUTION:** Apply sparingly. Steering linkage, sealed—no service. If looseness is evident, refer to Authorized Agency. See General Instructions

CRANKCASE

Six (3½ qts.) V-8 (4 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level to FULL mark on gage. Without gage, maintain level to bottom of filler tube. '63-'64 V-8 with air conditioning maintain level to ¾" to 1" from top of reservoir

CAUTION: '63-'64 filter element in reservoir, do not damage

DISTRIBUTOR OIL CUP

Every 12,000 miles

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)

Every 6000 miles. Remove plug, turn wheels to right and fill. With power brakes, fill thru upper cap screw hole, with steering wheel centered

TRANSMISSION

3-Speed: Six (2 pts.) V-8 (3½ pts.)
Six 4-Speed (4½ pts.)
V-8 4-Speed Warner (3½ pts.)
4-Speed Ford (4 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

MERC-O-MATIC, MULTI-DRIVE (7¾ qts.)
MULTI-DRIVE MERC-O-MATIC (8¾ qts.)

Dry capacities. Fill to full mark

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

Every 36,000 miles or 36 months. Remove and replace plug
Special adapter required

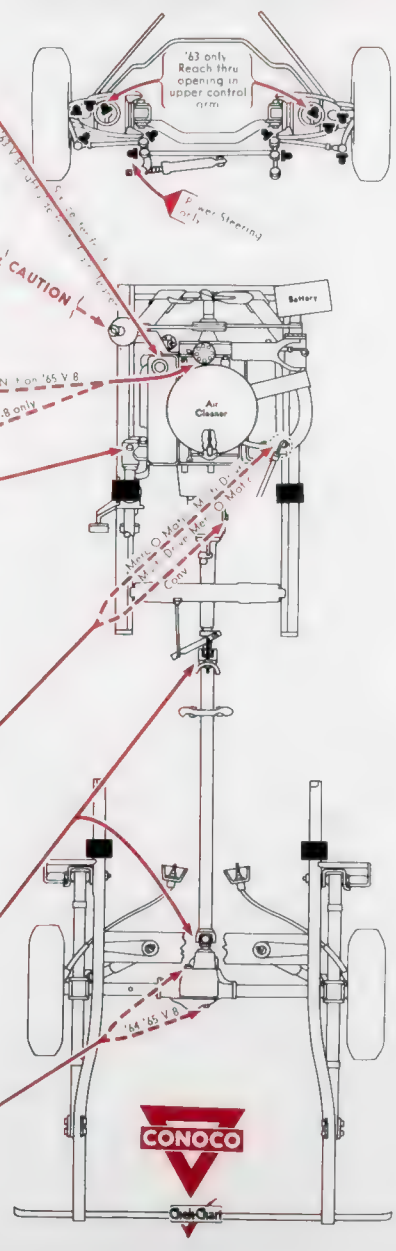
REAR AXLE

Six (2½ pts.)
V-8 289 cu. in., 271-hp engine (5 pts.)
Others (4½ pts.)

(Also includes Power Transfer axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



COOLING SYSTEM: Six 8½ qts. V-8 14 qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Replace polyurethane element every 12,000 miles.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

POSITIVE CRANKCASE VENTILATING SYSTEM
Early '63 Six no valve disassemble and clean tube, filter and separator every 6000 miles. Other '63, '64-'65 Six, all V-8, when equipped all valves except jiggle-pin type, disassemble and clean valve and all parts including filter on '63 V-8 every 6000 miles. Jiggle-pin type install new valve every 6000 miles and clean all other parts

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

GAS TANK: '63, 14 gals. '64-'65, 20 gals.

OLDSMOBILE 1965-'66
ALL MODELS EXCEPT F-85, TORONADO

KEY

- Conoco Super Lube
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

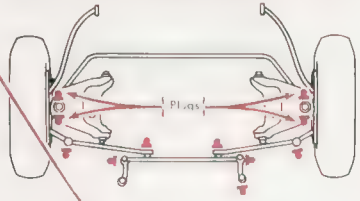
Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. '66 models sealed cap no service

Front suspension: Lubricate initially at 36,000 miles; thereafter—
'66: 12,000 miles or 12 months
'65: 12,000 miles or 6 months
Steering linkage: Lubricate
'66: 12,000 miles or 12 months
'65: 12,000 miles or 6 months

CAUTION: Apply sparingly. Use CONOCO SUPER LUBE. See General Instructions

COOLING SYSTEM: Jetstar 88, 15½ qts., others 16½ qts. (with heater add 1 qt.) With air conditioning add ½ qt. Do not fill above level mark on side of radiator below fill cap

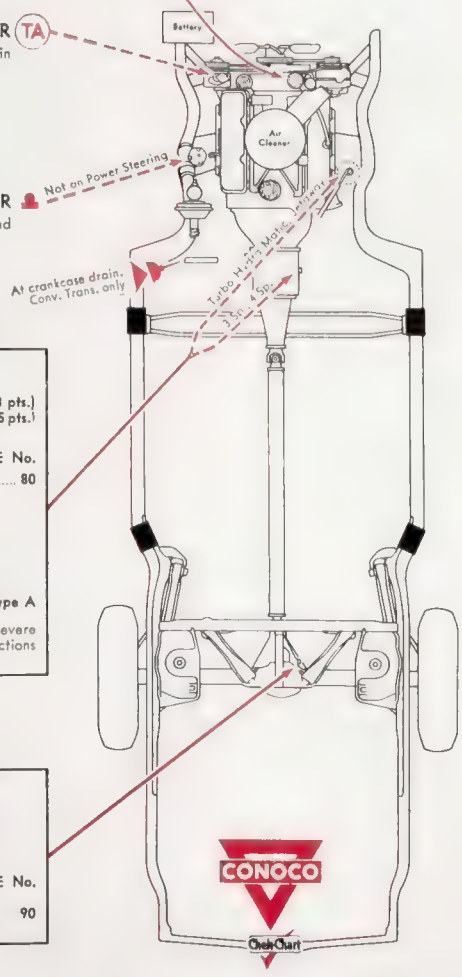


POWER STEERING RESERVOIR (TA)

At crankcase drain. Check level. Maintain to level mark at operating temperature

STEERING GEAR

Every 36,000 miles. Remove cap screw and check level



TRANSMISSION

'65 3-Speed: Jetstar 88 (2 pts.) Others (3 pts.)
'66 3-Speed: Jetstar 88 (3½ pts.) Others (5 pts.)
4-Speed (2¼ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

JETAWAY
(Approx. 3 qts.)

TURBO HYDRA-MATIC
(Approx. 4 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

REAR AXLE

Jetstar 88 (3 pts.) Others (4¾ pts.)
(Also includes Anti-Spin axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures . . 90

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

AIR CLEANER—AIR INJECTION REACTOR SYSTEM AIR FILTER

('66 California cars only) Wash and oil air filter every 12,000 miles with CONOCO ALL SEASON Super MOTOR OIL SAE No. 10W-30.

CRANKCASE VENTILATOR VALVE

('65) Disassemble and clean every 6000 miles. With closed system, wash and oil wire gauze filter inside air cleaner housing every 6000 miles. ('66) Install new valve every 6000 miles.

CRANKCASE VENTILATION FILTER

('66 ex. California cars) Wash and oil filter at crankcase drain with CONOCO ALL SEASON Super MOTOR OIL SAE No. 10W-30.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER

(All ex. late 1965, 1966 Jetstar 88) Replace filter every 24,000 miles, severe service 12,000 miles.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES

Refer servicing to Authorized Agency.

GAS TANK: 25 gals.

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
Jetstar 88	24	61
Others: Regular fuel	27	70
Premium fuel	27C	73

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All ..... minimum 100
Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS
AC 45S 2-bbl. low-compression engines
AC 44S 2-, 4-bbl. high-compression engines
Gap: .030"
Torque: 35 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new
Dwell angle: 28°-32° (30° preferred)

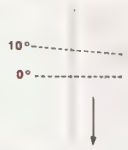
CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 850 rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
330 eng. 1965-66, 7½° at 850 rpm
425 L.C. eng. 1965-66, 7½° at 850 rpm
425 H.C. eng. 1965, 5° at 850 rpm; 1966 (2-bbl.), 5° at 850 rpm, (4-bbl.), 7½° at 850 rpm

FUEL PUMP
AC mechanical
Pressure: 1965, 7-8½ lb.; 1966, 7¾-9 lb., all at idle to 1000 rpm
Volume: Not required

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
2-bbl. 2GC	1½	index*	index*
4-bbl. 4GC	1½	index	index
4-bbl. 4MV	1½	index	index

* 1965 425 eng. with Manual Trans., 1 lean

ENGINE IDLE SPEED
Manual Trans.: 1965 all eng., 550 rpm; 1966 330 eng., 600 rpm; 425 eng., 550 rpm†
Auto. Trans.: 500 rpm* in DRIVE
Air Cond.: Manual Trans. 600 rpm; Auto. Trans.: 1965, 550 rpm; 1966, 575 rpm* in DRIVE; unit turned OFF; idle compensator valve held closed (Dealer installed unit turned ON)
* California cars 330 eng. with A.I.R., 600 rpm
† California cars with A.I.R., 500 rpm

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. DO NOT attempt to manually adjust the brakes on these cars
Bleeding sequences: LF, RF, LR, RR

OLDSMOBILE ALL MODELS EXCEPT F-85—1961-'64

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
Jetstar 88	24	61
Others, regular fuel	60	62, 70
Others, premium fuel	60	70

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All ..... minimum 100*
* Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS
AC: Jetstar 88, 44S; Dynamic 88 regular fuel eng. 45; others, 44
Gap: .030" Torque: 35 ft. lb.

IGNITION POINTS
Delco
Gap: .016"
Dwell angle: 28°-32° (30° preferred)

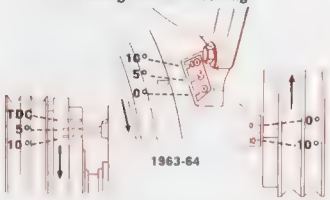
CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 8, 7, 3, 6, 5, 4, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 850 rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
1961: Regular fuel engine, 5°; Premium fuel engine, 7½°; at 850 rpm
1962-64: Manual Trans. 2½°; Auto. Trans. 5°; at 850 rpm

FUEL PUMP
AC mechanical
Pressure: 5-6 lb. at 1800 rpm
Volume: Not required

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
2-bbl. 2GC	1½	index*	index*
4-bbl. 4GC	1½	index	index

* 1962-63, 1 lean

ENGINE IDLE SPEED
Manual Trans.: 1961-63, 550 rpm; 1964 except Jetstar 88, 550 rpm; Jetstar 88, 600 rpm
Auto. Trans. 500 rpm in DRIVE
Air Cond. Same rpm* with unit turned OFF, and idle compensator valve held closed (Dealer installed unit turned ON)
* 1964, 550 rpm

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 4" with standard brakes or more than 1⅞" with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:*
1. Using a suitable tool inserted into the backing plate adjusting slot, expand the shoes until a heavy uniform drag is felt when revolving the brake drum
2. Back off adjustment 16 notches. Drum should turn freely
3. Repeat operation at each wheel

* 1962 power brakes and all 1963-64 brakes are self-adjusting. DO NOT attempt to manually adjust the shoe clearance on these cars
Bleeding sequence: LF, RF, LR, RR With power brakes, engine must be stopped and vacuum reserve depleted

KEY

- Conoco Super Lube
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

'61, lubricate front suspension every 1000 miles. '62, repack front suspension every 8000 miles with CONOCO SUPER LUBE M. '63-'64, front suspension: inspect every 6000 miles; every 30,000 miles refer to Authorized Agency for service. Steering linkage, lubricate every 6000 miles. **CAUTION:** Apply sparingly. See General Instructions

CRANKCASE (4 qts.)
Drain and refill: '63-'64—60 days or 6000 miles
'61-'62—Winter—30 days
Summer—60 days
Do not exceed 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

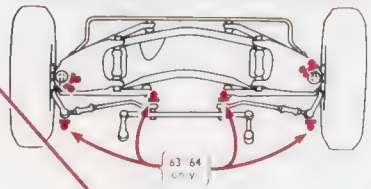
Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

COOLING SYSTEM: Quarts

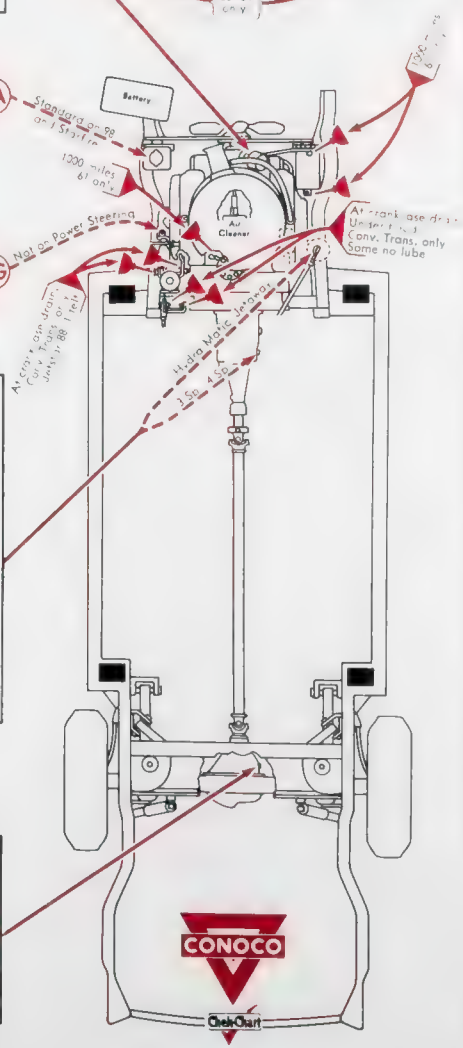
	With Air Cond.	Without Air Cond.
'61-'63	21	19¼
'64 Jetstar 88	17½	16
'64 Others	20½	18¾

With heater add 1 qt.



POWER STEERING RESERVOIR (TA)
At crankcase drain. Check level. Maintain to level mark at operating temperature

STEERING GEAR (SG)
At crankcase drain. Remove plug and fill



3-SPEED TRANSMISSION
Jetstar 88 (2 pts.)
Others (2½ pts.)

4-SPEED TRANS. (2¼ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

HYDRA-MATIC DRIVE
(Approx. 5½ qts.)

JETAWAY TRANSMISSION
(3 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles. See General Instructions

REAR AXLE
Jetstar 88 (2¾ pts.)
Others (5 pts.)

(Also includes Anti-Spin axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 6,000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE
When operated with [illegible] use every heating season [illegible] every 6,000 miles

FUEL FILTER
As required, clean glass bowl, clean or replace ceramic element.

OIL FILTER
Replace oil filter element at least every 4000 miles ('61-'62); 6000 miles ('63-'64) or more often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKE AIR CLEANER
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINTS
Sealed type bearings

GAS TANK: '61-'62, **20 gals.**, '63-'64 **21 gals.**

OLDSMOBILE F-85—1961-'62

KEY

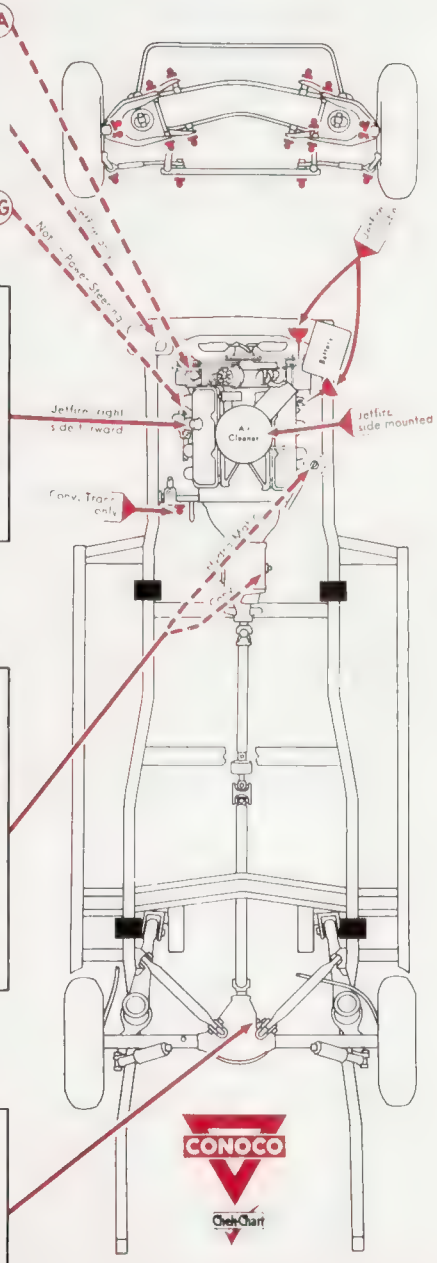
- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

POWER STEERING RESERVOIR (TA)
Check level. Maintain to FULL mark on gage at operating temperature

TURBO-ROCKET FLUID TANK
Refer servicing to Authorized Agency

STEERING GEAR (SG)
Remove plug and fill



CRANKCASE (4 qts.)
Drain and refill: Winter—30 days
Summer—60 days
Do not exceed 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

TRANSMISSION
3-Speed (2 pts.) 4-Speed (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

HYDRA-MATIC DRIVE
(Approx. 4 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles. See General Instructions

REAR AXLE (2 pts.)
(Also includes Anti-Spin axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

COOLING SYSTEM: 10½ qts. With air conditioning except Jetfire 11 qts. Jetfire 10 qts. (with heater add 1½ qts.)

SPECIAL SERVICES

AIR CLEANER
Wash element in kerosene every 2000 miles, dry and wet with CONOCO Super MOTOR OIL SAE No. 50.

AIR CLEANER—DRY TYPE
Replace element every 10,000 miles.

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 5000 miles.

FUEL FILTER
As required, clean glass bowl, clean or replace ceramic element.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearing.

UNIVERSAL JOINTS
Sealed type bearings.

GAS TANK: 16 gals., 3 seat Station Wagon 15 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	42

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
All ..... minimum	100*

* Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS
AC: 2-bbl. carb., 46FFX; 4-bbl. carb., Jetfire, 45FF
Gap: .030"
Torque: 12-17 ft. lb.*
* Use thread lubricant

IGNITION POINTS
Delco
Gap: .016"
Dwell angle: 28 -32 (30° preferred)

CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 850 rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
2-bbl. carb with Manual Trans. 5° at 850 rpm
2-bbl. carb. with Auto. Trans. 7½° at 850 rpm
4-bbl. carb. 7½° at 850 rpm
Jetfire, 10° at 850 rpm

FUEL PUMP
AC mechanical
Pressure: 1961, early 1962 (metal bottom cover): 4-5¼ lb. at 1800 rpm
Late 1962 (glass filter bowl): 7½-8½ lb. at 1800 rpm
Volume: Not required

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
2-bbl. 2GC	1½	index	1 lean*
4-bbl. 4GC	1½	index**	index**
RC (Jetfire)	1½	manual	index

* 1962, index
** 1962, 1 rich; fuel pump with glass filter bowl, 2 rich

ENGINE IDLE SPEED
Manual Trans. 550 rpm
Auto. Trans. 500 rpm in DRIVE
Air Cond. 550* rpm with unit turned OFF and idle compensator valve held closed (Dealer installed unit turned ON)
* Auto. Trans. in DRIVE

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 4" with standard brakes or more than 2" with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:
1. Using a suitable tool inserted into backing plate adjusting slot, expand shoes until a heavy drag is felt when revolving brake drum
2. Back off adjustment 15 notches. Drum should turn freely
3. Repeat operation at each wheel

Bleeding sequence: RR, LR, RF, LF With power brakes, engine must be stopped and vacuum reserve depleted

OLDSMOBILE TORONADO—1966

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
All	27C	73

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
All ..... minimum 100
Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS

AC 44S
Gap: .030"
Torque: 35 ft. lb.

IGNITION POINTS

Delco
Gap: .016" used; .019" new
Dwell angle: 28 -32 (30° preferred)

CONDENSER

Delco
Capacity: .18-.23 mfd

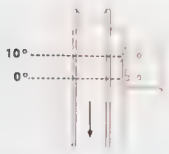
Cylinder Numbering Sequence

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 850 rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 7½°

FUEL PUMP

AC mechanical
Pressure: 7¾-9 lb. at idle to 1000 rpm
Volume: Not required

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
4-bbl. 4MV	1½	index	index

ENGINE IDLE SPEED

Auto. Trans. 500 rpm in DRIVE
Air Cond.: Manual Trans. 600 rpm; Auto. Trans. 575 rpm* in DRIVE; unit turned OFF; idle compensator valve held closed (Dealer installed unit turned ON)
* California cars with A.I.R., 500 rpm

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. DO NOT attempt to manually adjust the brakes on these cars
Bleeding sequence: LF, RF, LR, RR

KEY

- Conoco Super Lube
- Service From Under Hood
- (TA) Conoco Automatic Transmission Fluid Type A
- Positions For Frame Engaging Lift Adapters

Front suspension, repack at 36,000 miles and every 12 months or 12,000 miles thereafter. Steering linkage, lubricate every 12,000 miles or 12 months
CAUTION: Apply sparingly. Use CONOCO SUPER LUBE. See General Instructions

COOLING SYSTEM: 16½ qts. (with heater 17½ qts.) With air conditioning add ½ qt.

FRONT AXLE (4½ pts.)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90

POWER STEERING RESERVOIR (TA)
At crankcase drain. Check level. Maintain to level mark at operating temperature

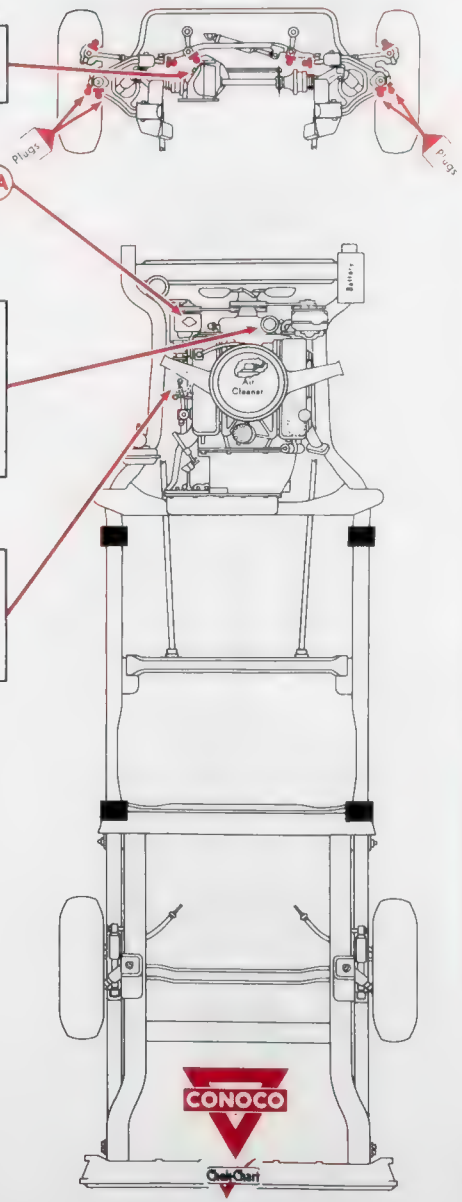
CRANKCASE (5 qts.)
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

TURBO HYDRA-MATIC (5 qts.)
Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions



SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

AIR CLEANER—AIR INJECTION REACTOR SYSTEM AIR FILTER
(California cars only) Wash and oil air filter every 12,000 miles with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W 30.

CRANKCASE VENTILATOR VALVE
Install new valve every 6000 miles. Also clean hoses.

CRANKCASE VENTILATOR FILTER
(Except California cars) Wash and oil filter at crankcase drain with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

FUEL FILTER
Replace fuel filter as required.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

REAR WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do not lubricate.

GAS TANK: 24 gals.

OLDSMOBILE F-85 V-6—1964-'65; F-85 V-8—1964-'66

KEY

- Conoco Super Lube
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage: '64 every 6000 miles or 6 months; '65, 6 months or 12,000 miles, '66 V-8 front suspension, repack at 36,000 miles and every 12 months or 12,000 miles thereafter. Steering linkage, lubricate every 12,000 miles or 12 months. **CAUTION:** Apply sparingly. Use CONOCO SUPER LUBE. See General Instructions

CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with sealed cap no service

STEERING GEAR

'64 (SG) Not on Power Steering

All '65, '66 V-8

'64 at crankcase drain; '65-'66 every 36,000 miles. Remove cap screw and check level

POWER STEERING RESERVOIR (TA)

At crankcase drain. Check level. Maintain to level mark at operating temperature

TRANSMISSION LINKAGE EQUALIZER

Every 6000 miles or 6 months. Lubricate thru hole in bottom of equalizer with rubber tipped or tapered adapter

TRANSMISSION

'64-'65 3-Sp. ex. V-8 400 cu. in. eng. (2 pts.)
'64-'65 3-Sp. V-8 400 cu. in. eng. (3 pts.)
'66 3-Speed V-8 400 cu. in. eng. (5 pts.)
Others (3½ pts.)
4-Speed (2¼ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

JETAWAY DRIVE

(Approx. 3 qts.)

Conoco Automatic Transmission Fluid Type A

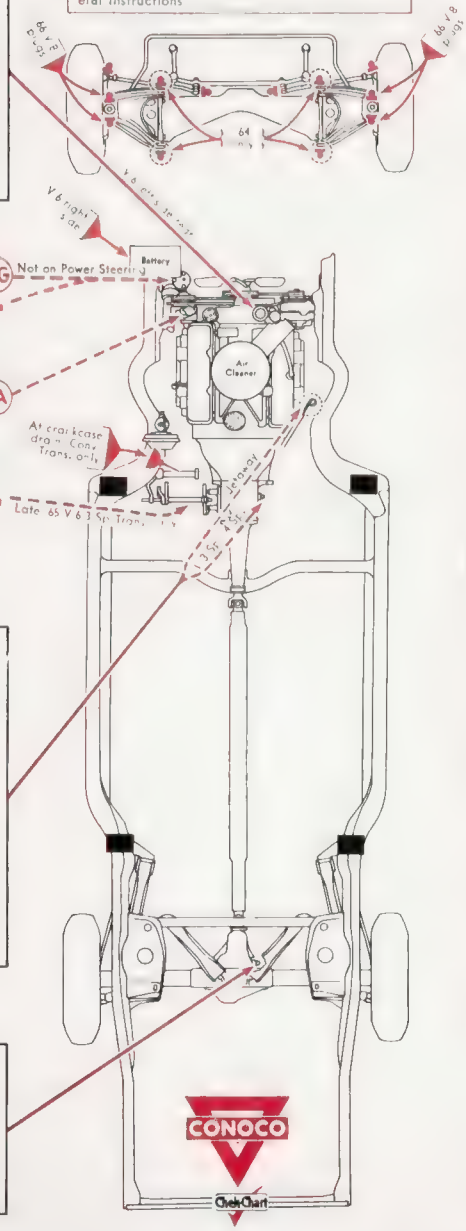
Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

REAR AXLE

'64 (2¾ pts.) '65, '66 V-8 (3 pts.)
(Also includes Anti-Spin axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



COOLING SYSTEM: V-6, 10 qts.-11¼ qts. V-8, 15½ qts.-18 qts.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess and reinstall.

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

AIR CLEANER—AIR INJECTION REACTOR SYSTEM AIR FILTER

('66 V-8 California cars only) Wash and oil air filter every 12,000 miles with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

CRANKCASE VENTILATOR VALVE

('64 V-6, '66 V-8) Install new valve every 6000 miles. ('65 V-6, '64-'65 V-8) Disassemble and clean every 6000 miles. V-6 models with sealed filler cap, clean breather filter on valve cover every 6000 miles. V-8 models with closed system, wash and oil wire gauze filter inside air cleaner housing every 6000 miles

CRANKCASE VENTILATION FILTER

('66 V-8 ex. California cars) Wash and oil filter at crankcase drain with CONOCO ALL SEASON Super MOTOR OIL SAE No. 10W-30.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER

(Late 1964 V-6, early 1965, all 1964 V-8) Replace filter every 24,000 miles, severe service 12,000 miles.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT

Refer servicing to Authorized Agency.

GAS TANK: 20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	61

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
All ..... minimum 100
Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS

AC; V-6, 44S; V-8, Low comp. 45S; High comp. 44S
Gap: .030"
Torque: 35 ft. lb.

IGNITION POINTS

Delco
Gap: .016" used; .019" new
Dwell angle: 28°-32° (30° preferred)

CONDENSER

Delco
Capacity: .18-.23 mfd

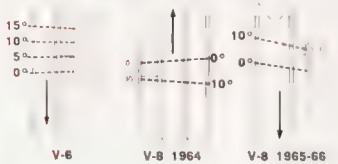
Cylinder Numbering Sequence

Firing Order: V-6, 1, 6, 5, 4, 3, 2
V-8, 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to, V-6, idle; V-8, 850 rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
V-6, 5°; 1964 at idle rpm; 1965 at 550 rpm; V-8, 7½° at 650 rpm

FUEL PUMP

AC mechanical
Pressure: V-6 1964, 4-5¼ lb.; 1965, 5-6 lb.
V-8: 1964-65, 7-8½ lb.; 1966, 7¾-9 lb., all at idle to 1000 rpm
Volume: Not required

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl. 1BC	1-1½	index	index
2-bbl. 2GC	1½	1 lean*	1 lean*
4-bbl. 4GC	1½	index	index
4-bbl. 4MV	1½	index	index

* 1965, index

ENGINE IDLE SPEED

Manual. Trans.: 1964 and 1966, 600 rpm*; 1965, 550 rpm
Auto. Trans.: V-6 1964, 600 rpm; 1965, 500 rpm; V-8 1964-65, 500 rpm in DRIVE; 1966 400 eng., 550 rpm* in DRIVE
Air. Cond.: V-6 1964, 600 rpm; V-8 1964, 550 rpm in DRIVE; V-6 1965, Manual Trans. 600 rpm, Auto. Trans. 550 rpm; V-8 1965-66 Manual Trans. 600 rpm*; 1965 Auto. Trans. 550 rpm in DRIVE; 1966 Auto. Trans. 330 eng. 575 rpm*, 400 eng. 600 rpm* in DRIVE; unit turned OFF and idle compensator held closed (Dealer installed unit turned ON)
* California cars with A.I.R., 600 rpm

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. DO NOT attempt to manually adjust the brakes on these cars
Bleeding sequence: LF, RF, LR, RR

OLDSMOBILE F-85—1963

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44

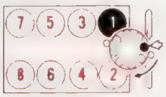
COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All .... minimum 100*
* Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS
AC: 2-bbl. carb., 46FFX; 4-bbl. carb., 45FF, with Auto. Trans. 44FF, Jetfire 45FF
Gap: 4-bbl. carb. with Manual Trans., Jetfire, .025", others, .030"
Torque 12 17 ft. lb.*
* Use thread lubricant

IGNITION POINTS
Delco
Gap: .016"
Dwell angle: 28°-32 (30° preferred)

CONDENSER
Delco
Capacity: .18-.23 mfd

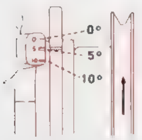
Cylinder Numbering Sequence



Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 850 rpm, transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
2-bbl. carb. with Manual Trans. 5° at 850 rpm
2-bbl. carb. with Auto. Trans. 7½° at 850 rpm
4-bbl. carb. 7½° at 850 rpm
Jetfire, 10 at 850 rpm

FUEL PUMP
AC mechanical
Pressure: 6-8 lb. at 1800 rpm
Volume: Not required

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
2-bbl. 2GC	1½	index	index
4-bbl. 4GC	1½	index	index
RC (Jetfire)	1	manual	index

ENGINE IDLE SPEED
Manual Trans. 550 rpm*
Auto. Trans. 500 rpm in DRIVE*
Air Cond. 600 (4-bbl. with Auto. Trans., 550) rpm** with unit turned OFF and idle compensator valve held closed. Dealer-installed unit turned ON
* Jetfire, 600 rpm
** Auto. Trans. in DRIVE

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. DO NOT attempt to manually adjust the brakes on these cars

Bleeding sequence: RR, LR, RF, LF With power brakes, engine must be stopped and vacuum reserve depleted

KEY

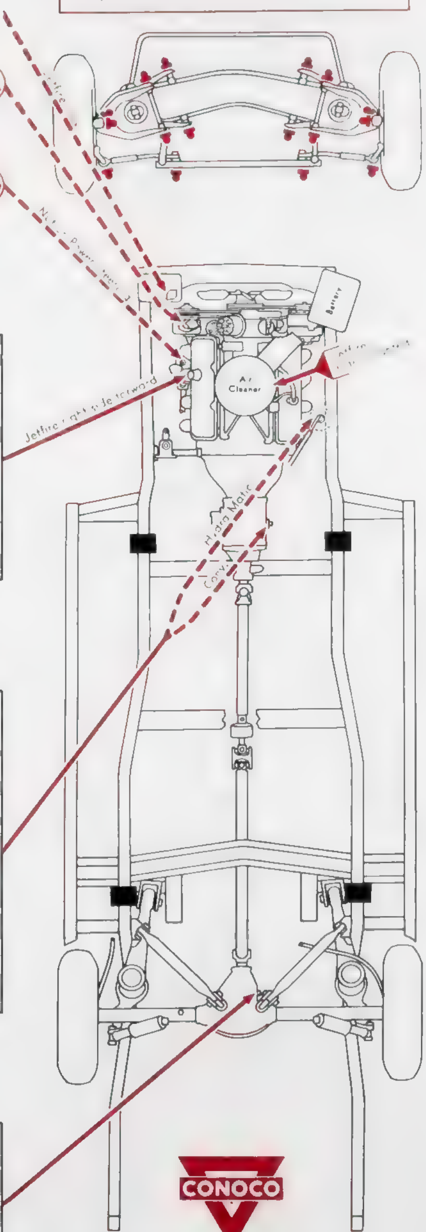
- Conoco Super Lube
- SG Conoco Steering Gear Grease
- TA Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months

TURBO-ROCKET FLUID TANK
Refer servicing to Authorized Agency

POWER STEERING RESERVOIR (TA)
At crankcase drain. Check level. Maintain to FULL mark on gage at operating temperature

STEERING GEAR (SG)
At crankcase drain. Remove plug and fill



CRANKCASE (4 qts.)
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and reoil with crankcase grade

TRANSMISSION
3-Speed (2 pts.) 4-Speed (2½ pts.)
Conoco Universal Gear Lubricant SAE No.
All temperatures 80

HYDRA-MATIC DRIVE
(Approx. 4 qts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: Every 24,000 miles. See General Instructions

REAR AXLE (2 pts.)
(Also includes Anti-Spin axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90

COOLING SYSTEM: 10½ qts. With air conditioning except Jetfire 11 qts. Jetfire 10 qts. (with heater add 1½ qts.)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
[illegible] every 6000 [illegible] ary. Dip [illegible] MOTOR OIL SAE N[illegible] [illegible]ve excess oil and reinstall

AIR CLEANER—DRY TYPE
Replace element every 12 000 miles

CRANKCASE VENTILATOR VALVE
[illegible]semble and clean every 6000 miles

CHOKE AIR INLET FILTER
Remove filter elem[illegible] 12 000 miles wash i[illegible] ALL SEASON S[illegible] SAE N[illegible] 10W 30 [illegible] install

FUEL FILTER
As required, clean glass bowl, clean or replace ceramic element

OIL FILTER
[illegible]

FRONT WHEEL BEARINGS
Clean and repack with [illegible] SUPER LUBE every 12,000 miles [illegible]

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINTS
Sealed type bearings

GAS TANK: 16 gals.

CONOCO Chek-Chart

PLYMOUTH SIX, VALIANT SIX — 1960-'61

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- SG — Conoco Steering Gear Grease
- TA — Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

CRANKCASE (4 qts.)

Drain and refill: 2 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)

Check level. Models with dipstick, maintain to level mark. Others, maintain level to base of filler neck when cold, halfway when hot

STEERING GEAR

Six — (90) Not on Power Steering
Valiant — (SG)
Remove plug and fill

DISTRIBUTOR OIL CUP

DISTRIBUTOR CAM CENTER

Under rotor—4 drops on wick

TRANSMISSION (4 pts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 20,000 miles

TORQUEFLITE TRANSMISSION (7 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 10,000 miles. See General Instructions

REAR AXLE

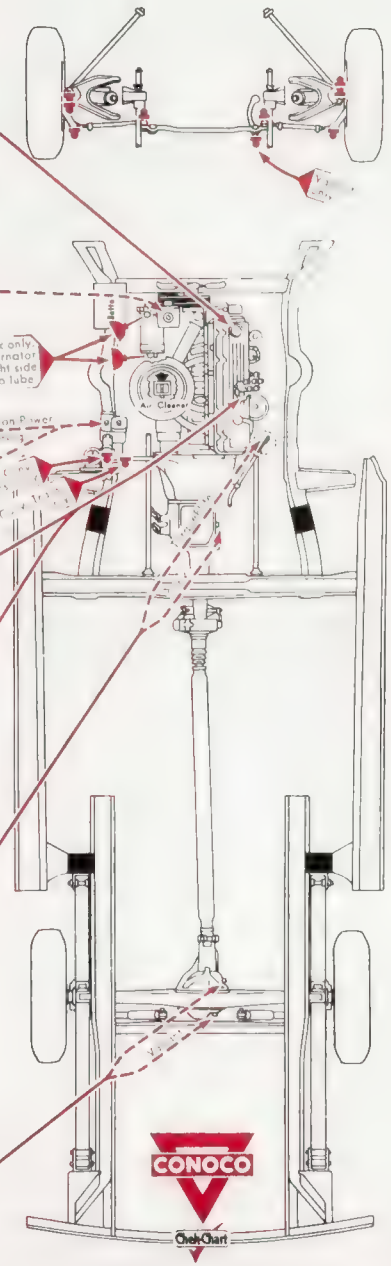
Six (3½ pts.) Valiant (2 pts.)

(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Drain and refill: Every 20,000 miles



COOLING SYSTEM: Six: '60, 13 qts., 61, 12 qts. Valiant 11 qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 10,000 miles.

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 5000 miles.

CRANKCASE BREATHER
Every 5000 miles wash element in kerosene, dry and recoil with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER
See General Instructions.

SPRINGS
Equipped with friction inserts. Do not lubricate

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Every 20,000 miles. See General Instructions.

GAS TANK: Six: 20 gals. Suburban 21 gals. Valiant 13 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24H	50
	27H	70

COMPRESSION PRESSURE
(psi at cranking speed, throttle open)

	min.	max.
All	130	160*

* Maximum variation between cylinders, 20 psi

SPARK PLUGS
Champion N-12Y
Gap: .035" Torque: 30 ft. lb.

IGNITION POINTS
Autolite, 1960; Chrysler, 1961
Gap: .017"-.023"
Dwell angle: 1960, 36 -42°; 1961, 40°-45°

CONDENSER
Autolite, 1960; Chrysler, 1961
Capacity: .25-.285 mfd

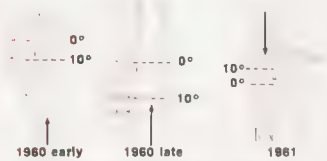
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 475-500 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
Plymouth: Man. Trans. 2½°; Auto. Trans. 5
Valiant: 2½

FUEL PUMP
Carter model M-2996S
Pressure: 3½-5 lb. at 500 rpm
Volume: 1 quart per minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL 1-bbl. BBS	1	index	index

ENGINE IDLE SPEED
Manual Trans. 550 rpm with headlights on high beam
Auto. Trans. 500 rpm in NEUTRAL with headlights on high beam
Air Cond. 550 rpm in NEUTRAL with unit turned ON and headlights on high beam

VALVE CLEARANCES
(engine hot and running)
Intake .010"; exhaust .020"

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated

Plymouth
Adjust the brakes as follows:

1. Turn one adjustment cam until heavy drag is felt when wheel is turned
2. Slowly back off cam until no drag is felt
3. Repeat steps 1 and 2 for other adjustment cam
4. Repeat steps 1, 2 and 3 for each brake

Valiant

1. Expand shoes until light drag is felt when rotating wheel
2. Back off adjustment 10-12 notches or until all drag is eliminated
3. Repeat steps 1 and 2 for each brake

Bleeding sequence: RR, LR, RF, LF
Plymouth: Bleed lower front wheel cylinder first

OLDSMOBILE F-85 SIX—1966

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
All ..... minimum 100
Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS

AC 46N; for continuous heavy-duty operation, 44N
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS

Delco
Gap: .016" used; .019" new
Dwell angle: 31°-34° (32° preferred)

CONDENSER

Delco
Capacity: .18-.23 mfd

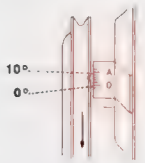
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6 at 500 rpm (Each line equals 2°)

FUEL PUMP

AC mechanical
Pressure: 4-5 lb.; California cars with A.I.R., 5½-7 lb., all at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle to 1000 rpm

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl. BV	1½	*	*
1-bbl. YF	1½	*	*

* One rod diameter above top of hole in choke lever. California cars with A.I.R. hold choke valve fully closed, bend choke rod at offset to obtain slight clearance (.015" max.) between fast idle cam and boss on carburetor

ENGINE IDLE SPEED

Manual Trans.: 500 rpm†; California cars with A.I.R., 600 rpm
Auto. Trans.: 500 rpm in DRIVE*†; California cars with A.I.R., 600 rpm in DRIVE
Air Cond.: 550 rpm in DRIVE*†

* Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts
† Air conditioning, set to normal idle speed with unit turned ON and idle compensator held closed. California cars with A.I.R., 650 rpm

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. DO NOT attempt to manually adjust the brakes on these cars
Bleeding sequence: LF, RF, LR, RR

KEY

- Conoco Super Lube
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

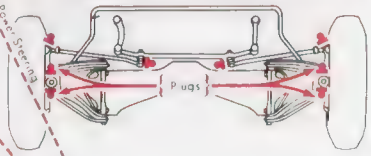
STEERING GEAR

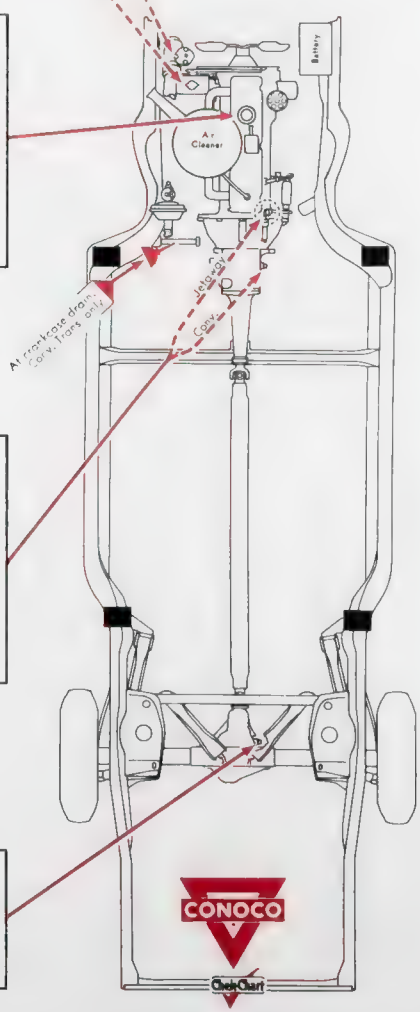
Every 36,000 miles. Remove cap screw and check level

Front suspension, repack at 36,000 miles and every 12 months or 12,000 miles thereafter. Steering linkage, lubricate every 12,000 miles or 12 months. **CAUTION:** Apply sparingly. Use CONOCO SUPER LUBE. See General Instructions

POWER STEERING RESERVOIR (TA)

At crankcase drain. Check level. Maintain to level mark at operating temperature





CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32° F.	10W-30
Above 0° F.	10W-30
Below 0° F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

TRANSMISSION (3½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

JETAWAY DRIVE

(Approx. 3 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

REAR AXLE (3 pts.)

(Also includes Anti-Spin axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

COOLING SYSTEM: 11 qts. (with heater 11¾ qts.)

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—AIR INJECTION REACTOR SYSTEM AIR FILTER

(California cars only) Wash and oil air filter every 12,000 miles with CONOCO ALL SEASON Super MOTOR OIL SAE No. 10W-30.

CRANKCASE VENTILATOR VALVE

Install new valve every 6000 miles. Also clean flame arrester inside air cleaner housing.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT

Refer servicing to Authorized Agency.

GAS TANK: 20 gals.

PLYMOUTH SIX, VALIANT SIX — 1962-'63

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension every 32 000 miles. CAUTION: Apply sparingly See General Instructions

CRANKCASE (4 qts.)
Drain and refill: 2 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

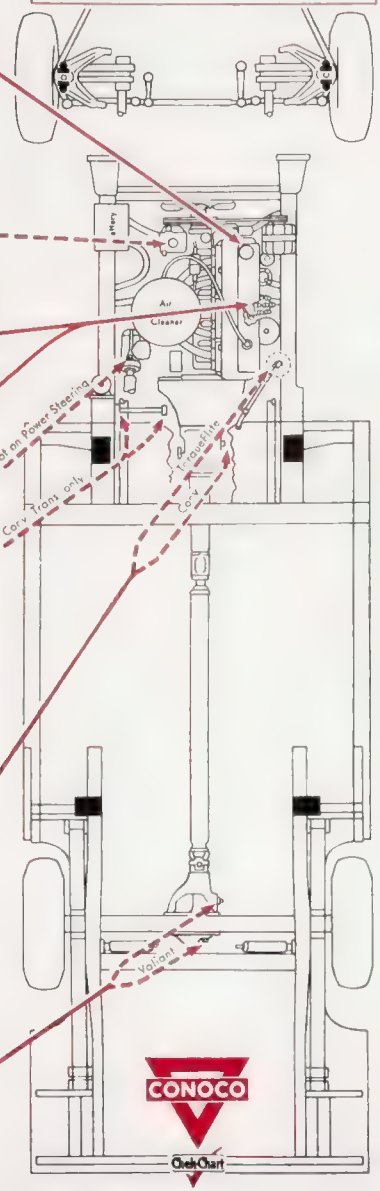
POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

STEERING GEAR (SG)
Every 4000 miles. Remove plug and fill

TORQUE SHAFT
Every 32,000 miles. Disassemble, clean and repack both ends



TRANSMISSION (5 pts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '62 every 32,000 miles

TORQUEFLITE TRANSMISSION (7 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '62 every 32,000 miles. See General Instructions

REAR AXLE

Six (4 pts.) Valiant (2 pts.)

(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

Drain and refill: '62 every 32,000 miles

COOLING SYSTEM: Six, Valiant Super 225 cu. in. engine **12 qts.** others **11 qts.** (with heater add **1 qt.**)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 8000 miles.

CRANKCASE BREATHER
Every 8000 miles wash element in kerosene, dry and recoil with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER
Replace filter at time of transmission drain.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions.

GAS TANK: Six: **20 gals.** Suburban **21½ gals.** Valiant: '62, **14 gals.** '63, **18 gals.**

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
Plymouth	24H	48, 59
Valiant	20H	38
	24H	48

COMPRESSION PRESSURE
(psi at cranking speed, throttle open)

	min.	max.
All	110	140*

* Maximum variation between cylinders, 20 psi

SPARK PLUGS
Champion: 1962, N-12Y; 1963, N-14Y*
Gap: .035" Torque: 30 ft. lb.
* 1963, gasket not required

IGNITION POINTS
Chrysler
Gap: .017"-.023" Dwell angle: 40°-45°

CONDENSER
Chrysler Capacity: .25-.285 mfd

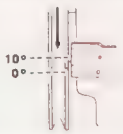
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 475-500 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 2½°

FUEL PUMP
Carter model M-2996S
Pressure: 3½-5 lb. at 500 rpm
Volume: 1 quart per minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL			
1-bbl. BBS	1	2 rich*	2 rich*
HOLLEY			
1-bbl. R	1	index**	index**
STROMBERG			
1-bbl. WA3	¾-1	—	2 rich

* 1963, 4 rich
** 1963, 2 rich

ENGINE IDLE SPEED
Man. Trans. 550 rpm with headlights on high beam
Auto Trans. 550 rpm in NEUTRAL with headlights on high beam
Air Cond. 550 rpm in NEUTRAL with unit turned ON and with headlights on high beam

VALVE CLEARANCES
(engine hot and running)
Intake .010"; exhaust .020"

BRAKE ADJUSTMENT

Plymouth
Brakes are self-adjusting. Adjustment is not normally required
Valiant
With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:

1. Expand shoes until light drag is felt when rotating wheel
2. Back off adjustment 10-12 notches or until all drag is eliminated
3. Repeat steps 1 and 2 for each brake

Bleeding sequence: RR, LR, RF, LF

PLYMOUTH V-8—1960-'61

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1960 with Commando eng.	24H	60
Others	24H	50
	27H	70
1961	24H	59
	27H	70

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)

	min.	max.
1960 with Commando engine	150	180*
1961 with 383 Commando engine	150	180*
Others	135	165**

* Maximum variation between cylinders, 25 psi
** Maximum variation between cylinders, 20 psi

SPARK PLUGS

Champion: Commando engine, J-9Y; others, J-12Y
Gap: .035"
Torque: 30 ft. lb.

IGNITION POINTS

Autolite: All 1960, 1961 with Commando engine; Chrysler, other 1961
Gap: .014"-.019"
Dwell angle: Single or dual points, 27°-32°; dual points, total dwell, 38°-40°

CONDENSER

Autolite: All 1960, 1961 with Commando engine; Chrysler, other 1961
Capacity: .25-.285 mfd

Cylinder Numbering Sequence

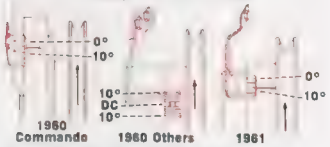
Commando Others

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 475-500 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



1960 Commando 1960 Others 1961

Timing Setting (Before Top Dead Center):

318 engine with Manual Trans.	5°
1960 with two carburetors	5
1961 with 383 engine	7½
Others	10

FUEL PUMP

Carter model: 318 engine, M-2608S; with Air Cond., M-2611S; Commando engine, M-2769S
Pressure: M-2769S, 3½-5 lb. at 500 rpm; others, 5-7 lb. at idle rpm
Volume: 1 quart per minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL			
2-bbl. BBD	1	index	index
CARTER			
4-bbl. AFB-2903S	1½	1 rich	1 rich
4-bbl. AFB-2968S, -3133S	1½	2 rich	2 rich
Other AFB	1½	index	index
STROMBERG			
2-bbl. WW15	1¼	index	index

ENGINE IDLE SPEED

Manual Trans. 500* rpm, headlights on high beam
Auto. Trans. 500* rpm in NEUTRAL with headlights on high beam
Air Cond. 550* rpm in NEUTRAL with unit turned ON and headlights on high beam
* With (2) 4-bbl. carburetors, 750 rpm

VALVE CLEARANCES

(engine hot and running)
Commando eng.: Hydraulic lifters
318 engine, 1960: Intake .010"; exhaust .018"
1961: Intake .013"; exhaust .021"

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
Two adjustment cams are provided on each backing plate. To tighten, turn both front brake cams and rear brake front cam in direction of forward wheel rotation. Tighten rear brake rear cam in opposite direction
Adjust the brakes as follows:

1. Turn one adjustment cam until heavy drag is felt when wheel is turned
2. Slowly back off cam until no drag is felt
3. Repeat steps 1 and 2 for other adjustment cam
4. Repeat steps 1, 2 and 3 for each brake

Bleeding sequence: RR, LR, RF, LF When bleeding front brakes, bleed lower cylinder first

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- (90) Conoco Universal Gear Lubricant SAE No. 90
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

POWER STEERING RESERVOIR (TA)
Check level. Models with dipstick, maintain to level mark. Others, maintain level to base of filler neck when cold, halfway when hot

CRANKCASE (5 qts.)
Drain and refill: 2 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (90)
Remove plug and fill
Not on Power Steering

DISTRIBUTOR OIL CUP
Comma... front of eng...

DISTRIBUTOR CAM CENTER
Under rotor—4 drops on wick

TRANSMISSION

Early '60 (2¾ pts.) Late '60, '61 (4 pts.)
Commando engine (3½ pts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 20,000 miles

POWERFLITE TRANSMISSION
(10 qts.)

TORQUEFLITE TRANSMISSION

Golden Commando engine (10½ qts.)
Others (9 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 10,000 miles. See General Instructions

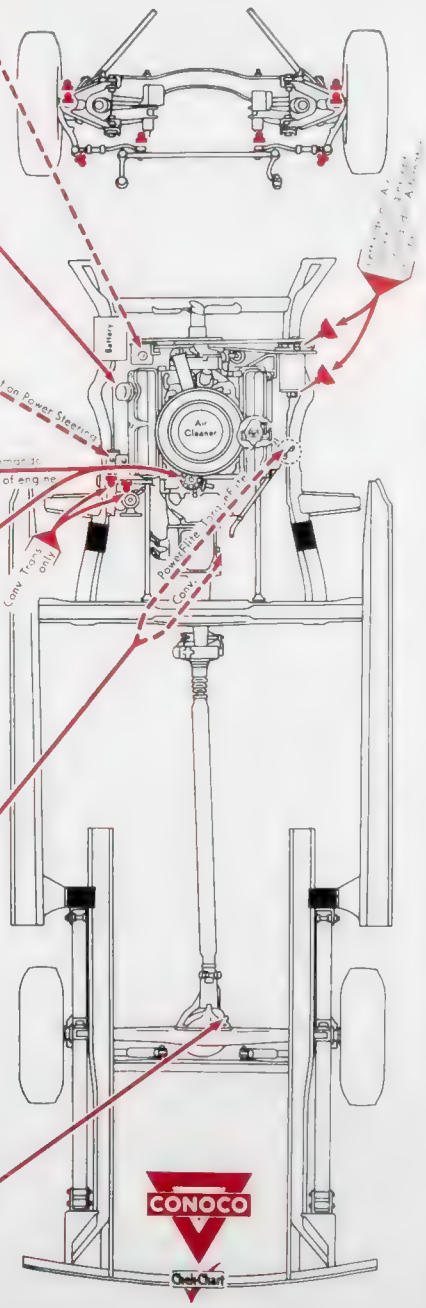
REAR AXLE (4 pts.)

(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

Drain and refill: Every 20,000 miles



COOLING SYSTEM: Commando engine 16 qts., others, 20 qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Re... ment every 10,000 ...

CRANKCASE VENTILATOR VALVE
A... ped with ... 0 ...

CRANKCASE BREATHER
Every 5000 miles wash ... dry and recoil with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30

FUEL FILTER
Re... ...

OIL FILTER
Re... ...

FRONT WHEEL BEARINGS
C... with CON... LUBE ...

HYDRAULIC BRAKES SPEEDOMETER
See General Instructions

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Equipped with friction inserts. Do ... cate

SHOCK ABSORBERS
... type. Nonrefillable, servicing ...

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINTS
Every 20,000 miles. See General Instructions

GAS TANK: 20 gals. Suburban 21 gals.

PLYMOUTH SIX, VALIANT SIX — 1964-'65

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1964-'65 Chrysler Corp. [illegible] The lubricants and service [illegible]

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 32,000 miles. **CAUTION:** Apply sparingly. See General Instructions

CRANKCASE (4 qts.)

Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

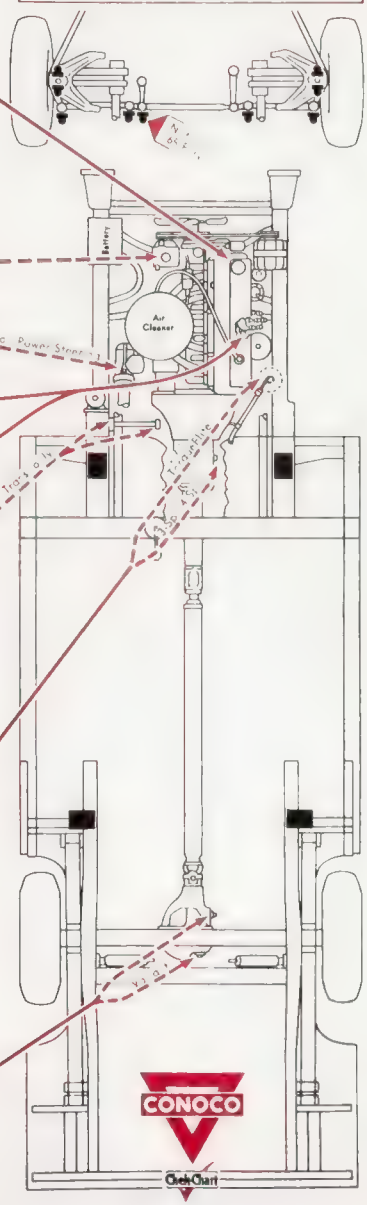
POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

STEERING GEAR (90)
Every 4000 miles. Remove plug and fill

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 4000 miles. Under rotor—4 drops on wick

TORQUE SHAFT
Every 32,000 miles. Disassemble, clean and repack both ends



3-SPEED TRANS. (5½ pts.)

Conoco Automatic Transmission Fluid Type A

4-SPEED TRANS. (6½ pts.)

Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

TORQUEFLITE TRANSMISSION (8 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

Six (4 pts.) Valiant (2 pts.)
(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Drain and refill: Every 20,000 miles

COOLING SYSTEM: Six, Valiant with Super 225 cu. in. engine **12 qts.** Others **11 qts.** (with heater add **1 qt.**)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 4000 miles. Fill to level mark with 1 pt. CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30.

CARBURETOR CHOKE SHAFT
Clean every 4000 miles. Remove air cleaner to service.

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions.

GAS TANK: 18-25 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
Plymouth	24H	48, 70
Valiant: 170 eng.	20H	38
1965 optional	24H	48
225 eng.	24H	48, 70

COMPRESSION PRESSURE
(psi at cranking speed, throttle open)

	min.	max.
All	110	140*

* Maximum variation between cylinders, 20 psi

SPARK PLUGS
Champion N-14Y; MoPar P-6-P
Gap: .035"
Torque: 30 ft. lb.

IGNITION POINTS
Chrysler
Gap: .017"-.023"
Dwell angle: 40 -45

CONDENSER
Chrysler
Capacity: .25-.285 mfd

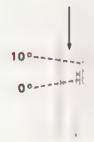
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 475-500 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 2½

FUEL PUMP
Carter model MS-3674S
Pressure: 3½-5 lb. at 500 rpm
Volume: 1 quart per minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL 1-bbl. BBS	1	2 rich	2 rich
HOLLEY 1-bbl. R	1	2 rich	2 rich

ENGINE IDLE SPEED
Manual Trans. 550 rpm with headlights on high beam
Auto. Trans. 550 rpm in NEUTRAL with headlights on high beam
Air Cond. 550 rpm in NEUTRAL with unit turned ON and with headlights on high beam

VALVE CLEARANCES
(engine hot and running)
Intake .010"; exhaust .020"

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF

PLYMOUTH V-8—1962-'63

TUNE-UP DATA

See Service Instructions for Procedure

(Following data does not include racing type engines)

BATTERY

	AABM Group No.	Amp. Hrs.
All	24H	48, 59

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)

	min.	max.
1962 318 engine	120	150*
1963 318 engine	120	155*
1962-63 361 engine	125	155*
1962-63 383 eng. Manual Trans.	150	180**
1962-63 383 eng. Automatic Trans.	130	165**

* Maximum variation between cylinders, 20 psi
** Maximum variation between cylinders, 25 psi

SPARK PLUGS

Champion: 383 eng. with 4-bbl. carb., J-9Y; others, J-12Y
Gap: .035"
Torque: 30 ft. lb.

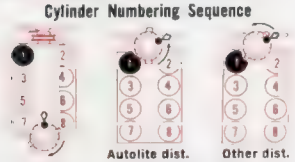
IGNITION POINTS

Autolite, Chrysler, Prestolite
Gap: Autolite, Chrysler .014"-.019"; Prestolite, .015"-.018"
Dwell angle: 1963 single points, Autolite, Chrysler, 28°-33°; Prestolite, 26°-32°; 1962 single points, 1962-63 each set of dual points, 27°-32°; dual points total dwell, 34°-40

CONDENSER

Autolite, Chrysler, Prestolite
Capacity: .25-.285 mfd

Cylinder Numbering Sequence



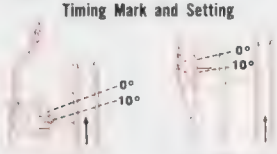
318 eng. — Autolite dist. — Other dist. — 361, 383 engs.

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 500 rpm, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



318 engine — 361, 383 engines

Timing Setting (Before Top Dead Center):

318 engine: Manual Trans.	5°
Auto. Trans.	10°
4-bbl. carburetor	10°
361, 383 engines	10

FUEL PUMP

Carter model: 318 engine, M-2608S; with Air Cond., M-2611S; 361, 383 engines, M-2769S
Pressure: M-2769S, 3½-5 lb.; others, 5-7 lb.; at idle rpm
Volume: 1 quart per minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL 2-bbl. BBD	1*	index	index*
CARTER 4-bbl. AFB	1½	2 rich**	2 rich**
STROMBERG 2-bbl. WW3	1¼	index	index

* 1963, 383 eng., ¾ turn idle mixture; 2 rich choke setting
** 1963, index

ENGINE IDLE SPEED

Manual Trans. 500 rpm, headlights on high beam
Auto. Trans. 500 rpm in NEUTRAL with headlights on high beam
Air Cond. 500 rpm in NEUTRAL with unit turned ON and headlights on high beam

VALVE CLEARANCES

(engine hot and running)
318 engine: Intake .013"; exhaust .021"
361, 383 engines: Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1963 Chrysler Corp. cars have a five-year or 50,000 mile factory warranty on power train components. The lubricants and service intervals on this chart completely satisfy warranty req[uirements]

POWER STEERING RESERVOIR (TA)

Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension every 32,000 miles. **CAUTION:** Apply sparingly. See General Instructions

COOLING SYSTEM: Commando engine **16 qts.**, others **20 qts.** (with heater add 1 qt.)

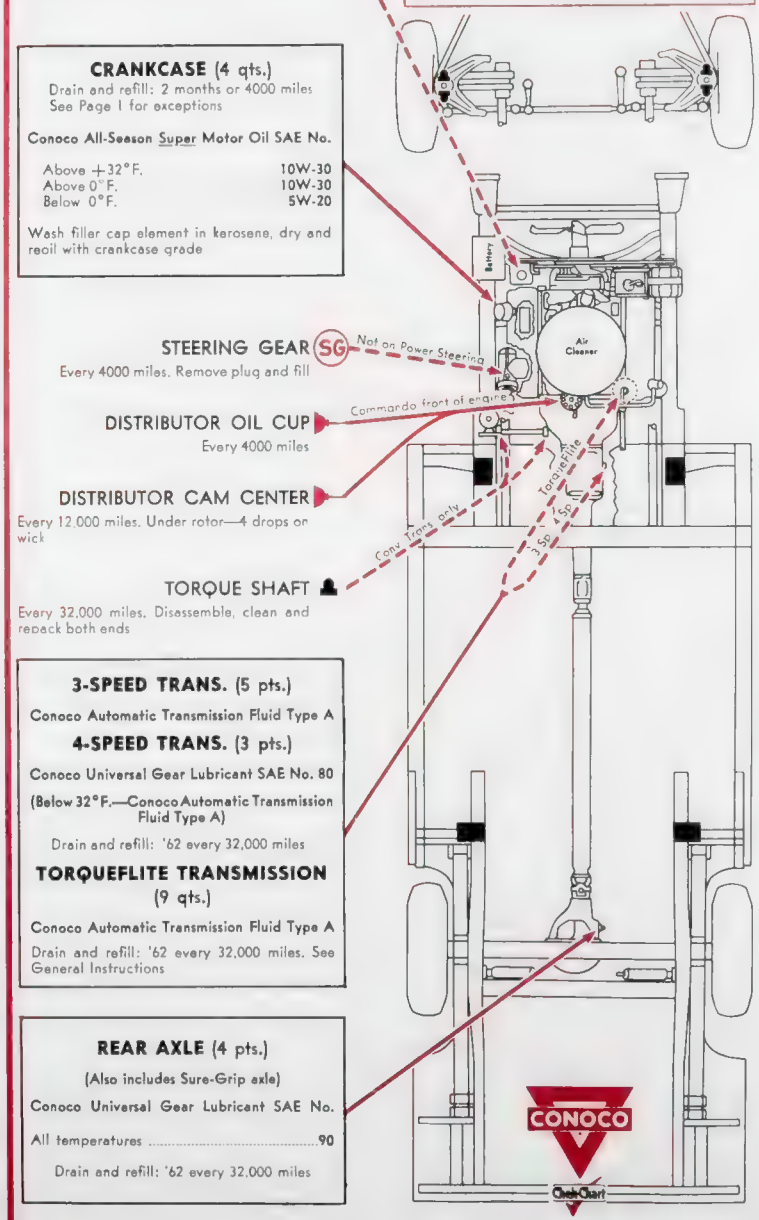
CRANKCASE (4 qts.)

Drain and refill: 2 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade



STEERING GEAR (SG)

Every 4000 miles. Remove plug and fill

DISTRIBUTOR OIL CUP

Every 4000 miles

DISTRIBUTOR CAM CENTER

Every 12,000 miles. Under rotor—4 drops on wick

TORQUE SHAFT

Every 32,000 miles. Disassemble, clean and repack both ends

3-SPEED TRANS. (5 pts.)

Conoco Automatic Transmission Fluid Type A

4-SPEED TRANS. (3 pts.)

Conoco Universal Gear Lubricant SAE No. 80

(Below 32°F.—Conoco Automatic Transmission Fluid Type A)

Drain and refill: '62 every 32,000 miles

TORQUEFLITE TRANSMISSION (9 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '62 every 32,000 miles. See General Instructions

REAR AXLE (4 pts.)

(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Drain and refill: '62 every 32,000 miles

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles

CRANKCASE VENTILATOR VALVE

When equipped with closed crankcase ventilating system, clean and test every 8000 miles

CRANKCASE BREATHER

Every 8000 miles wash element in kerosene, dry and recoil with CONOCO ALL SEASON Super MOTOR OIL SAE No. 10W-30

FUEL FILTER

Replace fuel filter every 12,000 miles

OIL FILTER

Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

AUTOMATIC TRANSMISSION FILTER

Replace filter at time of transmission drain

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions

AIR CONDITIONING UNIT POWER BRAKES

Refer servicing to Authorized Agency

SPRINGS

Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS

Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS

Sealed type bearings.

UNIVERSAL JOINTS

Every 32,000 miles. See General Instructions.

GAS TANK: 20 gals. Suburban 21½ gals.

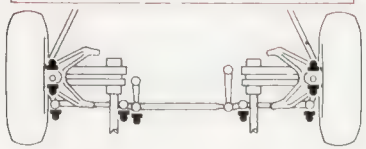
PLYMOUTH SIX, VALIANT SIX—1966

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1966 Chrysler [illegible] The [illegible] lubrication requirements

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 36,000 miles or 3 years. **CAUTION:** Apply sparingly. See General Instructions



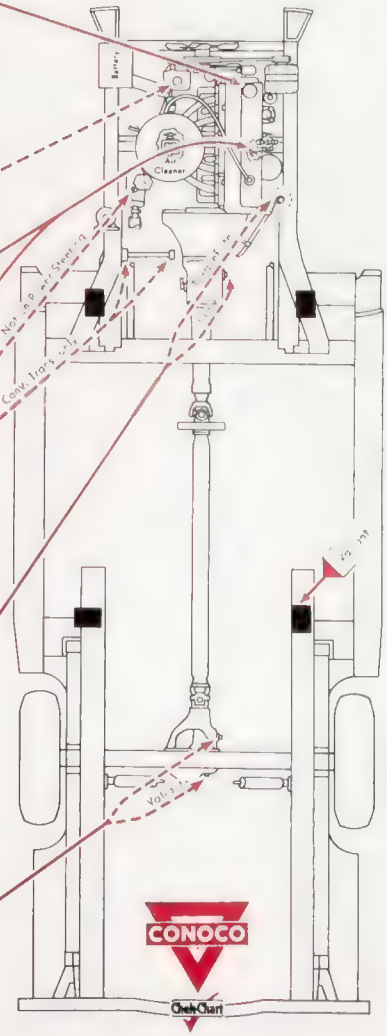
CRANKCASE (4 qts.)

Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade



POWER STEERING RESERVOIR (TA)

Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

DISTRIBUTOR OIL CUP

Every 4000 miles

DISTRIBUTOR CAM CENTER

Every 4000 miles. Under rotor—4 drops on wick

STEERING GEAR (90)

Every 4000 miles. Remove plug and fill

TORQUE SHAFT

Every 36,000 miles or 3 years. Disassemble, clean and repack both ends

TRANSMISSION (6½ pts.)

Conoco Automatic Transmission Fluid Type A

TORQUEFLITE TRANSMISSION (8 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

Valiant Six, Belvedere ex. Station Wag. (2 pts.)
Belvedere Sta. Wag., all Fury models (4 pts.)
(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

COOLING SYSTEM: Six, Valiant with Super 225 cu. in. engine **12 qts.** Others **11 qts.** With heater, and/or with air conditioning or high-capacity system add **1 qt.**

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 4000 miles. Fill to level mark with CONOCO ALL SEASON Super MOTOR OIL SAE No. 10W-30.

CARBURETOR CHOKE SHAFT
Clean every 4000 miles. Remove air cleaner to service.

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 36,000 miles. See General Instructions.

UNIVERSAL JOINT SPLINE
Coat spline evenly with CONOCO SUPER LUBE M every 36,000 miles

GAS TANK: 18-25 gals.

TUNE-UP DATA

See Service Instructions for Procedure

CAP is Cleaner Air Package for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
170 engine	20H	38
	24H	48, 70
225 engine	24H	48
	24H	70

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)

	min.	max.
All	110	140*

* Maximum variation between cylinders, 20 psi

SPARK PLUGS

Champion N-14Y or MoPar P-6-6P
Gap: .035"
Torque 30 ft. lb

IGNITION POINTS

Chrysler
Gap: .017"-.023"
Dwell angle: 40 -45

CONDENSER

Chrysler
Capacity. .25-.285 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center)
170 engine 5 °
225 engine 2.5 °
° California car with CAP, 5 After Top Dead Center

FUEL PUMP

Carter model MS-3674S
Pressure: 3½-5 lb. at 500 rpm
Volume: 1 quart per minute or less at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL 1-bbl. BBS	1-2	2 rich	2 rich
HOLLEY 1-bbl. R, 1920	2	2 rich	2 rich

ENGINE IDLE SPEED

Manual Trans.: 550 rpm; CAP, 170 eng. 700 rpm, 225 eng. 650 rpm; headlights ON high beam
Auto. Trans.: 550 rpm; CAP, 650 rpm; in NEUTRAL; headlights ON high beam
Air Cond. Same rpm as listed with unit turned ON; CAP with unit turned OFF; headlights ON high beam

VALVE CLEARANCES

(engine hot and running)
Intake .010"; exhaust .020

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required
Disc brakes optional. Replace pads when thickness reaches .030 inch
Bleeding sequence: RR, LR, RF, LF

PLYMOUTH V-8, VALIANT V-8—1964-'65

TUNE-UP DATA

See Service Instructions for Procedure

(Following data does not include racing-type engines)

BATTERY

	AABM Group No.	Amp. Hrs.
273, 318 engines	24H	48, 70
361 engine	24H	59
383, 426 engines (1964)	24H	59
	27H	70
383, 426 engines (1965)	27H	70

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)	min.	max.
273 engine ex. 1964 Valiant	120	150*
318 engine, 1964 Valiant 273 eng.	125	155*†
361, 383 2-bbl. carb. engines (1964)	130	165**
361, 383 2-bbl. carb. engines (1965)	125	155*
273, 383 4-bbl. carb., 426 engines	130	165**

Maximum variation between cylinders:
* 20 psi; ** 25 psi; † 1964 20 psi; 1965 25 psi

SPARK PLUGS

1964 Champion, 383 eng. with 4-bbl., 426 eng. J-10Y; others J-12Y
1964-65: 273 eng., Champion N-14Y or MoPar P-6-6P; 4-bbl., Champion N-9Y, MoPar P-6-2P; 1965 318, 361, 383 2-bbl., Champion J-14Y or MoPar P-3-6P; 383 4-bbl., 426 engs., Champion J-10Y or MoPar P-3-3P
Gap: .035" Torque: 30 ft. lb.

IGNITION POINTS

Chrysler, Prestolite Gap: .014"-.019"
Dwell angle: Plymouth: Single points 28°-33°; each set of dual points 27°-32°, total dwell 34°-40
Valiant: Single points 28°-32°; each set of dual points 27°-31°, total dwell 36°-40
* 273, 318 engines, 28°-33°

CONDENSER

Chrysler, Prestolite Capacity: .25-.285 mfd

Cylinder Numbering Sequence

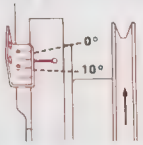
Prestolite dist. Chrysler dist.
273, 318 engs. 361, 383, 426 engs.

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed, transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten clamp screw, recheck timing
8. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
273, 318 engines: Manual Trans. 5°; Auto. Trans. 10
Others: 10

FUEL PUMP

Carter model: 273 eng., MS-3962S; 318 eng., MS-3673S; 361, 383, 426 engs., MS-3672S
Pressure: MS-3962S, MS-3673S, 5-7 lb.; MS-3672S, 3½-5 lb.; at idle rpm
Volume: 1 quart per minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL			
2 bbl. BBD			
273, 318 engs.	1	index	index
361, 383 engs.	¾	2 rich	2 rich
CARTER			
4-bbl. AFB	1-2	index*	index*
STROMBERG			
2-bbl. WW3	1¼	index	index
2-bbl. WWC3	1½	1 rich	1 rich

* 1965: 383 engine, 2 rich

ENGINE IDLE SPEED

Manual Trans. 500 rpm*, headlights on high beam
Auto. Trans. 500 rpm* in NEUTRAL with headlights on high beam
Air Cond. 500 rpm* in NEUTRAL with unit turned ON and headlights on high beam
* 1965: 383 Hi-Perf., 426 engines, 550 rpm. Valiant 4-bbl. carb. 600 rpm

VALVE CLEARANCES
(engine hot and running)
273, 318 engines: Intake .013"; exhaust .021"

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1964-'65 Chrysler Corp. cars have a five-year or 50,000 mile factory warranty on power-train components. The lubricants and service intervals on this chart completely satisfy warranty requirements

POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 32,000 miles. CAUTION: Apply sparingly. See General Instructions

COOLING SYSTEM: 318 cu. in. engine **20 qts.** 273 cu. in. engine, '65 Valiant **17 qts.** Others **16 qts.** (with heater add 1 qt.)

CRANKCASE

'64 426 cu. in. engine **(5 qts.)** Others **(4 qts.)**

Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

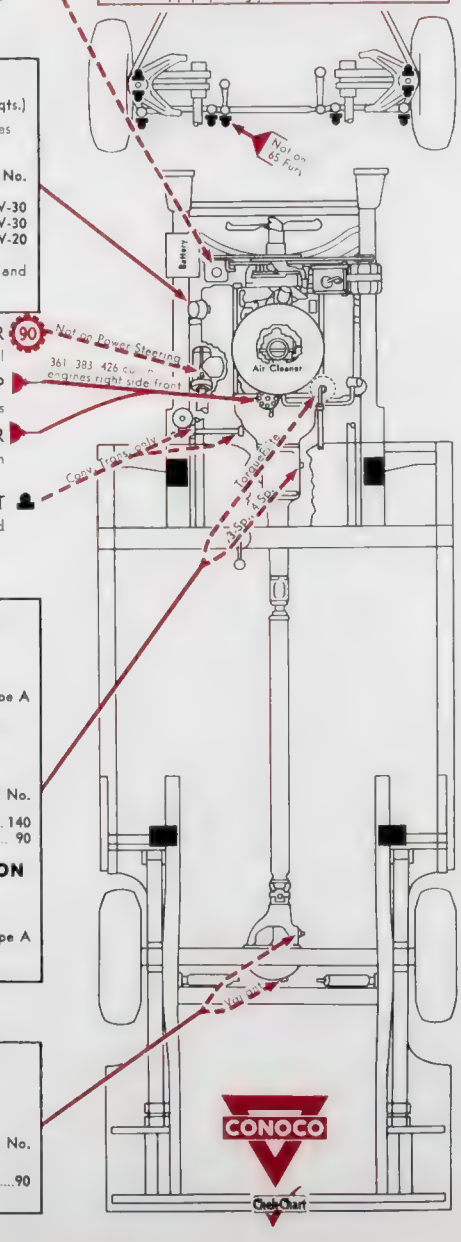
Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (90)
Every 4000 miles. Remove plug and fill

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 4000 miles. Under rotor—4 drops on wick

TORQUE SHAFT
Every 32,000 miles. Disassemble, clean and repack both ends



3-SPEED TRANSMISSION

V-8, '65 Valiant **(4 pts.)**
'64 Valiant **(5½ pts.)**

Conoco Automatic Transmission Fluid Type A

4-SPEED TRANSMISSION

V-8 **(7 pts.)** Valiant **(6½ pts.)**

Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

TORQUEFLITE TRANSMISSION

V-8 **(9 qts.)** Valiant **(8 qts.)**

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

V-8 **(4 pts.)** Valiant **(2 pts.)**

(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 4000 miles. Fill to mark with 1 pt. CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30

CARBURETOR CHOKE SHAFT
Clean every 4000 miles. Remove air cleaner to service.

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 32,000 miles. See General Instructions.

UNIVERSAL JOINT SPLINE
(1965 V-8 TorqueFlite) Coat spline evenly with CONOCO SUPER LUBE M every 32,000 miles.

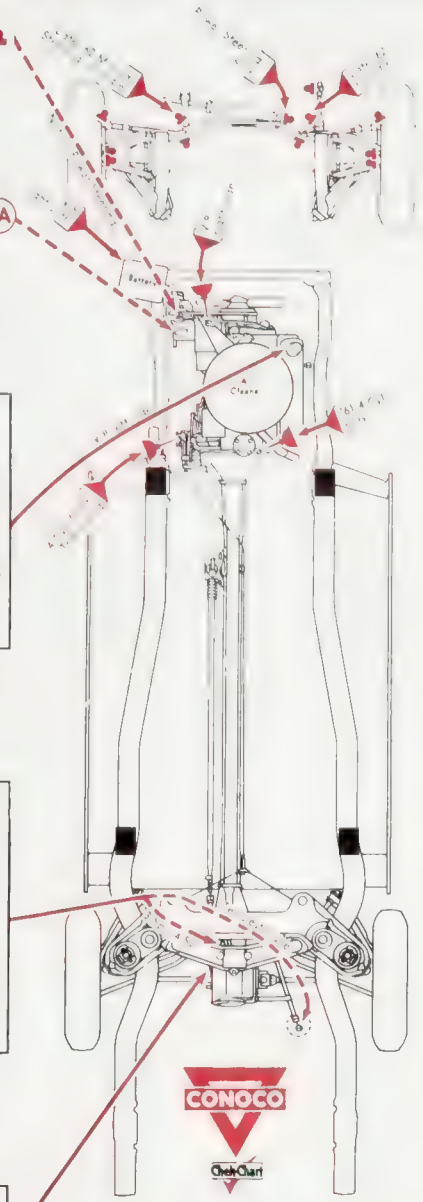
GAS TANK: 18-25 gals.

PONTIAC TEMPEST 4, V-8—1961-'62

KEY

- Conoco Super Lube or Conoco Pressure Lube (Seasonal Grade)
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES



STEERING GEAR
Remove plug and fill

POWER STEERING RESERVOIR (TA)
Check level. Maintain level between FULL and ADD marks on dipstick

CRANKCASE (4 qts.)
Drain and refill: Winter—30 days
Summer—60 days
Do not exceed 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

TRANSMISSION
3-Speed (3 pts.) 4-Speed (4 pts.)
Conoco Universal Gear Lubricant SAE No.
All temperatures ... 80

TEMPESTORQUE
(3 qts.)
Conoco Automatic Transmission Fluid Type A
See General Instructions

REAR AXLE (3 pts.)
Conoco Universal Gear Lubricant SAE No.
All temperatures 80

LIFTING PRECAUTIONS
Never lift car by front or rear bumpers

COOLING SYSTEM: 11½ qts. With air conditioning 12 qts. (with heater add 1 qt.)

AIR CLEANER
Wash element in kerosene every 2000 miles, dry and wet with CONOCO Super MOTOR OIL SAE No. 50.

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 5000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and ...

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, install new valve every 5000 miles.

FUEL FILTER
Fuel filter in fuel line replace every 12,000 miles. Fuel filter in carburetor, clean twice yearly, replace every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM
Refer servicing to Authorized Agency.

SHOCK ABSORBERS
Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings.

UNIVERSAL JOINTS
Sealed type bearings.

GAS TANK: 16 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	42
	24	61

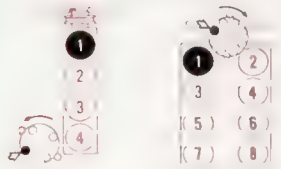
COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
8.6:1CR; 8.8:1CR 140-160*
10.25:1CR; 11.0:1CR 170-190*
* Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS
AC: 4-cyl. 45S; V-8, 1961, 45FFS, 1962, 44FFS
Gap: 4-cyl. .033"-.038" (.035" preferred); V-8, .030"-.034" (.032" preferred)
Torque: 4-cyl. 25 ft. lb.; V-8, 15-20 ft. lb.*
* Use thread lubricant

IGNITION POINTS
Delco
Gap: 4-cyl. .019"; V-8 .016"
Dwell angle: 4-cyl.: 74 -76° (75° preferred); late 1962 without adjusting window, 31 -34°; V-8, 28 -32° (30° preferred)

CONDENSER
Delco Capacity: .18-.23 mfd

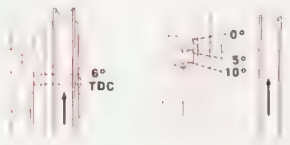
Cylinder Numbering Sequence



Firing Order:
4-cyl. 1, 3, 4, 2 V-8 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape line opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at harmonic balancer and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
4-cyl. 6°; V-8, 5°

FUEL PUMP
AC: 4-cyl. 4843; V-8, 4827
Pressure: 4-cyl. 4-5¼ lb.; V-8, 4-5½ lb.; at 1800 rpm (tested at carburetor height)
Volume: 1 pint in 45 seconds or less, at idle rpm

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl. B	1½	manual	—
1-bbl. BC	1½	index	index
2-bbl. 2GC	1½	index	index
4-bbl. 4GC	1½*	1 rich**	1 rich

* Air bleed screw, 1 turn
** V-8, index

ENGINE IDLE SPEED
Manual Trans.: 4-cyl. 680-700 rpm; V-8, 580-600 rpm
Auto. Trans., 580-600 rpm in DRIVE
Air Cond.: 4-cyl. Manual Trans. 680-700 rpm; Auto. Trans. 630-650 rpm in DRIVE. V-8, 580-600 rpm in DRIVE, with unit turned OFF

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2", the need for service is indicated
Adjust the brakes as follows:
1. Make sure parking brake is completely released
2. Expand shoes to produce a 5-8 lb. drag at outside of tire when wheel is turned
3. Back off adjustment 10 notches on front brakes, 12* notches on rear brakes. Drum should turn freely without drag
4. Repeat procedure at each wheel

* Back off 14 notches if hoist supports rear suspension near ends of control arms and prevents rear wheels from hanging down

Bleeding sequence: LF, RF, LR, RR

PLYMOUTH V-8, VALIANT V-8—1966

TUNE-UP DATA

See Service Instructions for Procedure

CAP is Cleaner Air Package for California cars
(Following data does not include racing-type engs.)

BATTERY

	AABM Group No.	Amp. Hrs.
273, 318 engines	24H	48
361 engine	24H	59
	27H	70
383, 426, 440 engines	27H	70

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)	min.	max.
273 engine: 2-bbl. carb.	120	150*
4-bbl. carb.	150	180**
318 engine	110	140**
361, 383 2-bbl. engines	125	155*
383 4-bbl., 426, 440 engines	130	165**

* Maximum variation between cylinders, 20 psi
** Maximum variation between cylinders, 25 psi

SPARK PLUGS

273 eng. 2-bbl. Champion N-14Y or MoPar P-6-6P
273 eng. 4-bbl. Champion N-9Y or MoPar P-6-2P
318, 361, 383 2-bbl. Champion J-14Y or MoPar P-3-6P
383 4-bbl., 426, 440 Champion J-13Y or MoPar P-3-5P*
Gap: .035" Torque: 30 ft. lb.
* If J-13Y or P-3-5P are not available, use Champion J-12Y

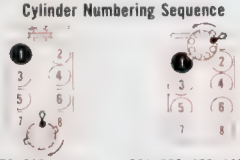
IGNITION POINTS

Chrysler, Prestolite Gap: .014"-.019"
Dwell angle: 28°-32°; dual points each set 27°-31°, total dwell 36°-40°

CONDENSER

Chrysler, Prestolite
Capacity: .25-.285 mfd

Cylinder Numbering Sequence

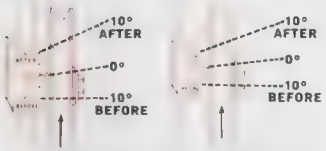


273, 318 engs. 361, 383, 426, 440 engs.

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE See Page 89

Timing Mark and Setting



273, 318 engs. 361, 383, 426, 440 engs.

Timing Setting (Before Top Dead Center):
273 2-bbl. and 318 engs.: Manual Trans. 5°*; Auto. Trans. 10°*
273 4-bbl. eng. 10°*
361, 383, 426, 440 engs. 12.5°*
* California car with CAP:
273, 318 engs., 5° After Top Dead Center
361, 383 engs. Manual Trans. 5 After Top Dead Center; Auto. Trans. TDC. 426, 440 engs. TDC

FUEL PUMP

Carter models: 273 MS-3962; 318 MS-3673S; 361, 383, 426, 440, MS-3672S
Pressure: MS-3692, MS-3673S, 5-7 lb.; MS-3672S, 3½-5 lb.; at 500 rpm
Volume: 1 quart per minute or less at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL			
2-bbl. BBD	1*	2 rich**	2 rich**
CARTER			
4-bbl. AFB	1-2	2 rich**	2 rich**
STROMBERG			
2-bbl. WW3	1¼●	2 rich**	2 rich**
2-bbl. WWC3	1½	—	2 rich**

* California car with CAP, 273 eng. 2 turns
** California car with CAP. Index (except 361 eng., 383 2-bbl. Man. Trans.; with BBD carb. 2 rich
● California car with CAP, ½ turn

ENGINE IDLE SPEED

Manual Trans.: 273 4-bbl. 600 rpm; others 500 rpm; CAP 273 700 rpm; others 650 rpm
Auto. Trans.: 273 4-bbl. 600 rpm; others 500 rpm; CAP 273 650 rpm; others 600 rpm; in NEUTRAL
Air Cond. Same rpm as listed with unit turned ON; CAP with unit turned OFF

VALVE CLEARANCES
(engine hot and running)

273, 318 engs.: Intake .013"; exhaust .021"
361, 383, 426, 440 engines: Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes, except —
With trailer-towing package, brakes must be adjusted manually. Adjust brakes as follows:
1. Back off parking brake cable adjustment until there is slack
2. Using suitable tool inserted into adjustment opening, turn star wheel adjuster until slight drag is felt when wheel is turned
3. Back off adjustment 10-12 notches or until wheel turns freely
4. Repeat procedure at each wheel
5. Readjust parking brake cable

Disc brakes optional. Replace pads when thickness reaches .030 inch
Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

1966 Chrysler Corp. cars have a five-year or 50,000 mile factory warranty on power train component. The lubricants and service intervals on this chart completely satisfy warranty requirement

POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level to base of filler neck when cold, halfway when hot

Inspect front suspension and steering linkage seals every 4000 miles. Repack front suspension and steering linkage every 36,000 miles or 3 years. **CAUTION:** Apply sparingly. See General Instructions

CRANKCASE

426 cu. in. engine (5 qts.) Others (4 qts.)

Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

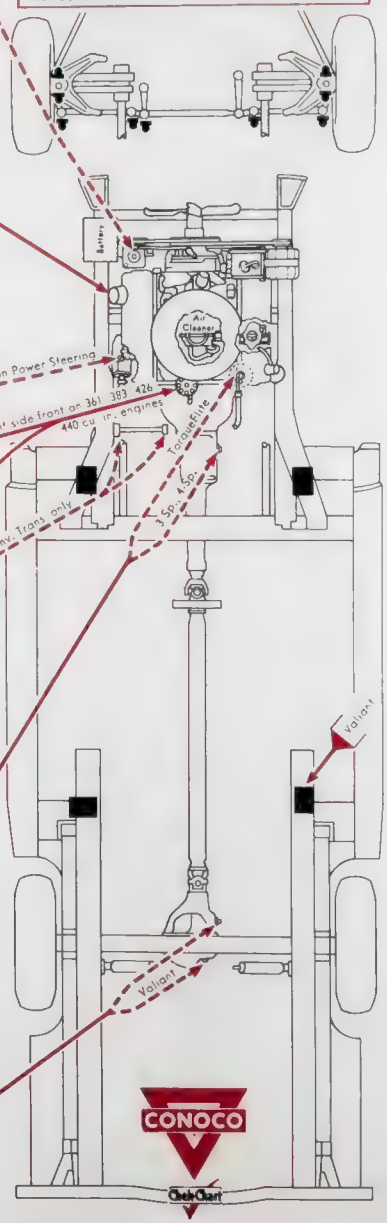
Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (90)
Every 4000 miles. Remove plug and fill

DISTRIBUTOR OIL CUP
Every 4000 miles

DISTRIBUTOR CAM CENTER
Every 4000 miles. Under rotor—4 drops on wick

TORQUE SHAFT
Every 36,000 miles or 3 years. Disassemble, clean and repack both ends



3-SPEED TRANSMISSION (6 pts.)

Conoco Automatic Transmission Fluid Type A

4-SPEED TRANSMISSION (8½ pts.)

Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

TORQUEFLITE TRANSMISSION

V-8 (9 qts.) Valiant (8 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE

V-8 (4 pts.) Valiant (2 pts.)
(Also includes Sure-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

COOLING SYSTEM: Valiant, V-8 273 cu. in. engine **17 qts.** 318 cu. in. engine **20 qts.** Others **16 qts.** With heater, and/or with air conditioning or high capacity system add **1 qt.**

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 4000 miles. Fill to level mark with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30

CARBURETOR CHOKE SHAFT
Clean every 4000 miles. Remove air cleaner to service.

CRANKCASE VENTILATOR VALVE
Install new valve every 4000 miles.

FUEL FILTER
Replace fuel filter every 12 000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT POWER BRAKES
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 36,000 miles. See General Instructions

UNIVERSAL JOINT SPLINE
Coat spline evenly with CONOCO SUPER LUBE M every 36,000 miles.

GAS TANK: 18-25 gals.

PONTIAC TEMPEST 4, V-8—1963

KEY

- Conoco Super Lube
- Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles

STEERING GEAR

Every 6000 miles or 6 months. Remove plug and fill

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level between FULL and ADD marks on dipstick

CRANKCASE (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap elements in kerosene, dry and recoil with crankcase grade

TRANSMISSION

3-Speed (3 pts.) 4-Speed (3¾ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

TEMPESTORQUE

(2 qts.)

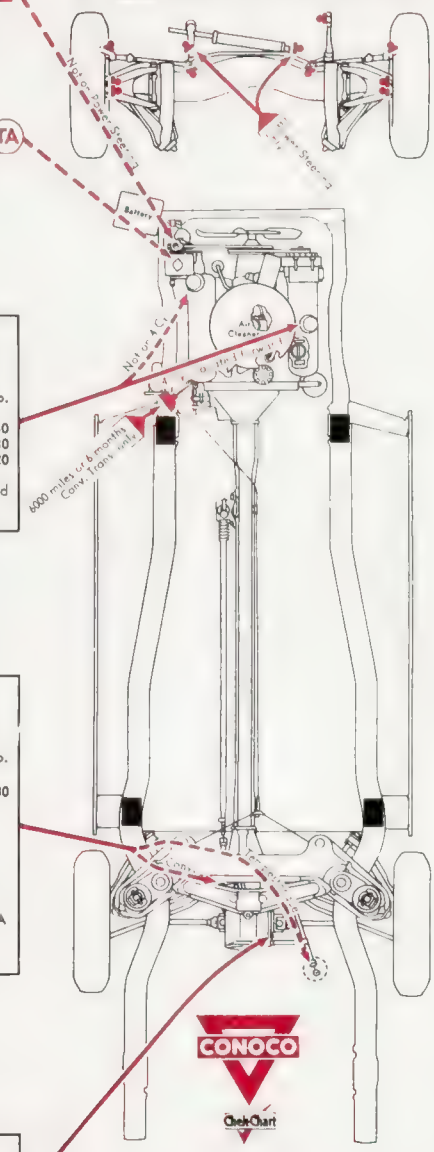
Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE (3¼ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80



LIFTING PRECAUTIONS

Never lift car by front or rear bumpers

COOLING SYSTEM: 4 Cyl. 11½ qts. V-8 20 qts. With air conditioning 4 Cyl. 12 qts. V-8 21½ qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER

Wash element in kerosene every 6000 miles, dry and wet with CONOCO Super MOTOR OIL SAE No. 50.

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

CRANKCASE VENTILATOR VALVE

Install new valve every 6000 miles.

FUEL FILTER

Fuel filter in fuel line replace every 12,000 miles. Fuel filter in carburetor clean twice yearly, replace every 12,000 miles.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM

Refer servicing to Authorized Agency.

SHOCK ABSORBERS

Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS

Sealed type bearings.

UNIVERSAL JOINTS

Sealed type bearings.

GAS TANK: 20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
4-cylinder	22F	44
	24	61
V-8	24	53, 61

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
7.6:1CR; 8.6:1CR	140-160*
10.25:1CR	170-190*

* Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS
AC 45S; heavy duty, 44S
Gap: .035" Torque: 25 ft. lb.

IGNITION POINTS
Delco
Gap: 4-cyl. .019"; V-8 .016"
Dwell angle: 4-cyl., 31°-34°; V-8, 28°-32° (30° preferred)

CONDENSER
Delco Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order:
4-cyl. 1, 3, 4, 2
V-8 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape line opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at harmonic balancer and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center): 6°

FUEL PUMP
AC: 4-cyl., 4843; V-8, 6542
Pressure: 4-cyl., 4-5½ lb.; V-8, 5¼-6¾ lb.; at 1000 rpm (tested at carburetor height)
Volume: 1 pint in 45 seconds or less at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. AFB	1*	1 rich	1 rich
ROCHESTER			
1-bbl. B	1½	manual	—
1-bbl. BC	1½	index	index
2-bbl. 2GC	1½	index	index
4-bbl. 4GC	1½**	1 rich	1 rich

* Air bleed screw, initial adjustment, 1½ turns
** Air bleed screw, initial adjustment, 1 turn

ENGINE IDLE SPEED
Man. Trans.: 4-cyl. 680-700 rpm; V-8 580-600 rpm
Auto. Trans.: 4-cyl. 580-600 rpm; 480-500 rpm; in DRIVE
Air Cond., 4-cyl. Manual Trans., 680-700 rpm; Auto. Trans. 580-600 rpm in DRIVE with unit turned OFF; V-8: Manual Trans. 640-660 rpm; Auto. Trans. 540-560 rpm in DRIVE; with unit turned OFF
Make certain idle compensator valve is closed, if so equipped

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, make initial adjustment as follows:

1. Turn adjusting screw to produce a 5-8 lb. drag on outside of tire
2. With small screw driver hold adjuster lever away from adjusting screw and back off adjustment 22 notches on front brakes and 26 notches on rear brakes. (Back off 30 notches on rear brakes if lift supports rear suspension near ends of control arms and prevents rear wheels from hanging down) Drum should turn freely without drag
3. Repeat procedure at each wheel

Bleeding sequence: LF, RF, LR, RR

PONTIAC ALL MODELS EXCEPT TEMPEST—1961-'66

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	53, 61
1961-63 optional	27	72
1964-66 optional	24T	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

1961-62 8.6: 1CR 140-160*
10.25: 1CR, 10.75: 1CR 170-190*
1963-66 8.6: 1CR 140-150*
10.25: 1CR, 10.50: 1CR, 10.75: 1CR 155-165*

* Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS

AC 45S except 421 H.O. eng. or all with trailer package, AC 44S; 1961-62 Tempest high speed 44
Gap: .033"-.038" (.035" preferred)
Torque: 15-25 ft. lb.

IGNITION POINTS

Delco
Gap: .016"
Dwell angle: 28°-32° (30° preferred)

CONDENSER

Delco
Capacity: .18-.23 mfd

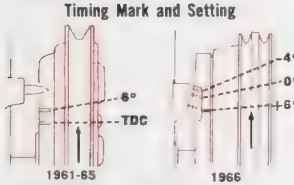
Cylinder Numbering Sequence

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at harmonic balancer and turn distributor to obtain recommended setting
7. Reconnect distributor vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6° (including California car with Air Injection Reactor System)

FUEL PUMP

AC: 1961-65, model 4512; with Air Cond., 6550. 1966, model 40239
Pressure: 1961-62, 5¼-6¾ lb.; 1963-66, 5¼-6½ lb. at 500-1000 rpm*
Volume: 1 pint in 45 seconds or less at idle rpm
* Air Cond.: 1963-65, at 1800 rpm; 1966, 4-5½ lb. at 1000 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. AFB	1*	1 rich**	1 rich**
ROCHESTER			
2-bbl. 2GC	1½	index	index
(3) 2-bbl. 2GC	1½†	index	index

* Air bleed screw, initial adjustment, 1½ turns
** 1963 index
† Idle adjustment on center carburetor only

ENGINE IDLE SPEED

Manual Trans.: 1961-64, 480-500 rpm*; 1965-66, 600 rpm; A.I.R. 700 rpm
Auto. Trans.: 500 rpm†; A.I.R. 600 rpm, in DRIVE
Air Cond.: 1961-62, 540-560 rpm; 1963-66, Manual Trans. 700 rpm (including A.I.R.); Auto. Trans. 575 rpm‡; A.I.R. 600 rpm; in DRIVE with unit turned OFF
* 421 H.O.: 1964, 640-660 rpm
† 421 H.O.: 1964, 640-660 rpm; 1965-66, 600 rpm
‡ 421 H.O.: 1964, 690-710 rpm; 1965-66, 675 rpm

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

1961-62
With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:

1. Make sure the parking brakes are completely released
2. Expand shoes until wheels can just be turned by hand
3. Back off adjustment 12 notches
4. Repeat procedure at each wheel

1963-66
Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LF, RF, LR, RR

KEY

- Conoco Super Lube
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- TA — Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

Lubricate front suspension and steering linkage: '61 every 1000 miles; '62-'66, 6000 miles or 6 months

POWER STEERING RESERVOIR (TA)
'61-'62 every 4000 miles; '63-'66, 6000 miles or 6 months. Check level. Maintain to level mark

CRANKCASE
421 cu. in. engine (5 qts.) '61-'64 (4 qts.) '65 (5 qts.) '66 (6 qts.)
Drain and refill: '63-'66—60 days or 6000 miles
'61-'62—Winter—30 days
Summer—60 days
Do not exceed 4000 miles
See Page 1 for exceptions
Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap elements in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

STEERING GEAR — Not on Power Steering
'61-'62 every 4000 miles; '63-'66, 6000 miles or 6 months. Remove plug ('61-'63) or cap screw ('64-'66) and check level

TRANSMISSION
3-Speed '61-'64 (1¾ pts.)
3-Speed H.D. '61-'64 (2¾ pts.)
3-Speed H.D. '64-'66 (5 pts.)
4-Speed (2½ pts.)
Conoco Universal Gear Lubricant SAE No.

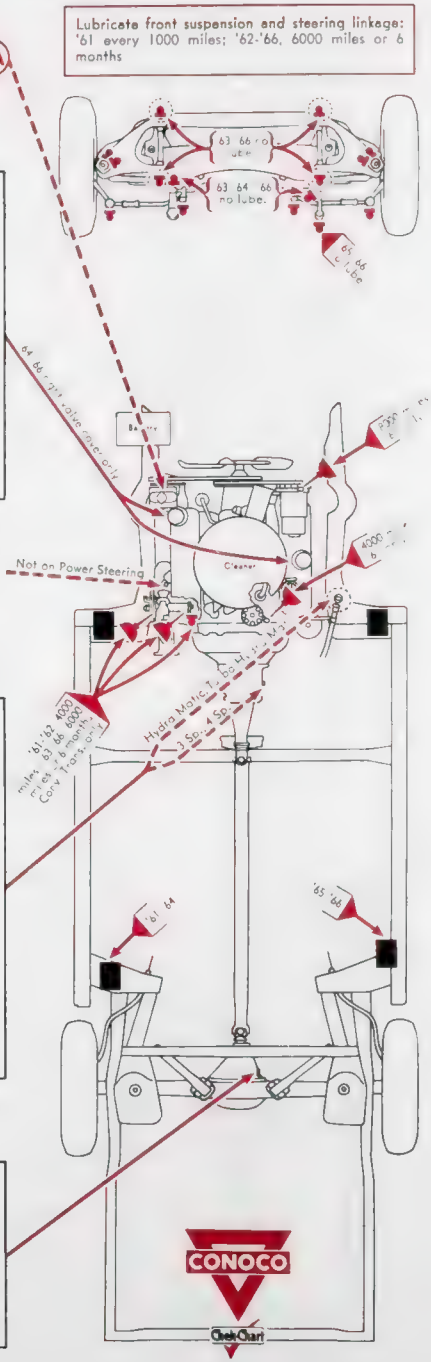
All temperatures	80

HYDRA-MATIC DRIVE
'61-'64 Bonneville, Star Chief (9 qts.)
Others (6 qts.)

TURBO HYDRA-MATIC
All '65-'66 (3½ qts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: Every 24,000 miles, severe service 12,000 miles. '63, lock dipstick in place. See General Instructions

REAR AXLE
'61-'62 (5½ pts.) '63-'64 (5¾ pts.)
'65-'66 (4½ pts.)
(Also includes Safe-T-Track axle)
Conoco Universal Gear Lubricant SAE No.

All temperatures	80



COOLING SYSTEM: '61-'64, 18½ qts., '65-'66, 19 qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER
Wash element in kerosene every 6000 miles, dry and wet with CONOCO Super MOTOR OIL SAE No. 50.

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 6000 miles clean in kerosene and [illegible]. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, install new valve every 6000 miles.

FUEL FILTER
('61-'62) Replace fuel filter element every 12,000 [illegible] every [illegible] can in fuel line is not a filter. Do not [illegible]

OIL FILTER
Replace oil filter element at least every 4000 miles ('61-'62); 6000 miles ('63-'66) or more often if oil becomes dirty.

AUTOMATIC TRANSMISSION FILTER
('[illegible] '66) Replace filter every 24,000 miles, severe service 12,000 miles.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM POWER BRAKES
Refer servicing to Authorized Agency.

GAS TANK: Safari '61-'64, 19 gals. '65-'66, 24 gals. Others '61-'64, 25 gals. '65-'66, 26½ gals.

PONTIAC TEMPEST SIX—1966

KEY

- Conoco Super Lube
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

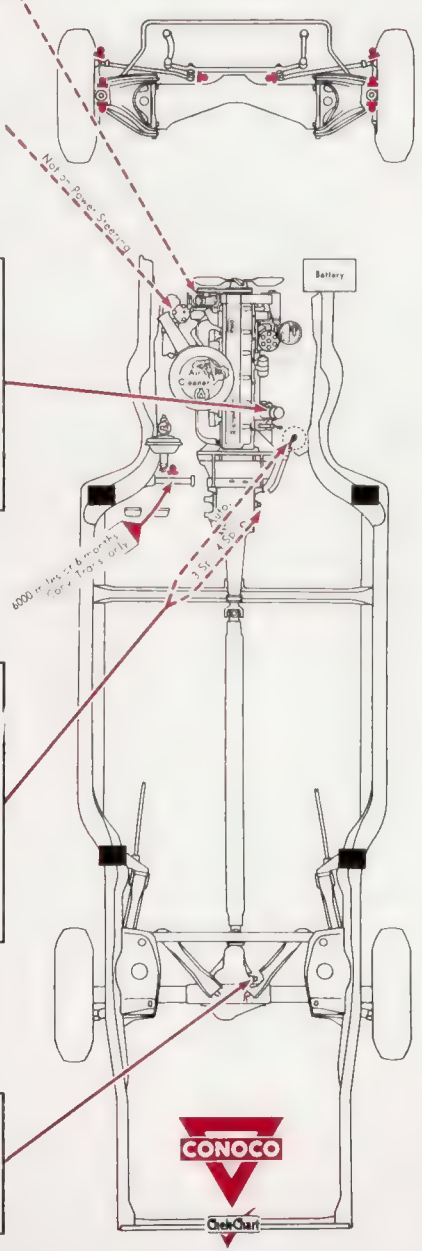
Lubricate front suspension and steering linkage every 6 months or 6000 miles

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level between FULL and ADD marks on dipstick

STEERING GEAR

Every 6000 miles or 6 months. Remove cap screw and check level



CRANKCASE (5 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

TRANSMISSION

3-Speed (3½ pts.) 3-Speed H.D. (2¾ pts.)
4-Speed (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

AUTOMATIC TRANSMISSION

(Approx. 3 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

REAR AXLE (3 pts.)

(Also includes Safe-T-Track axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

COOLING SYSTEM: 13½ qts. With air conditioning 14½ qts.

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

Remove polyurethane element every 6000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W-30, remove excess and reinstall.

CRANKCASE VENTILATOR VALVE

Install new valve every 6000 miles.

FUEL FILTER

Fuel filter element in carburetor clean every 12,000 miles. Note: Red can in fuel line is not a filter. Do not replace.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC-MECHANISM

Refer servicing to Authorized Agency.

GAS TANK: 21½ gals.

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
1-bbl. carb.	22F	44
2-bbl. carb.	24	53
Air cond.	24	61
Optional	24	61

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
No cylinder should be less than 80% of the highest cylinder

SPARK PLUGS

AC 44S
Gap: .033"-.038" (.035" preferred)
Torque: 15-25 ft. lb

IGNITION POINTS

Delco
Gap: .019" new; .016" used
Dwell angle: 31°-34

CONDENSER

Delco
Capacity: .18-.23 mfd

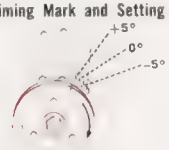
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
5 °

* California car with Air Injection Reactor System, 5° After Top Dead Center

FUEL PUMP

AC mechanical, Pontiac Part No. 6416094
Pressure: 3½-4½ lb. at 500-1000 rpm
Volume: Not required

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
1-bbl. BV	1½	*	*
4-bbl. 4MC	2	**	**

* Bend choke rod to allow .045"-.075" clearance between lower edge of choke valve and wall of air horn, when idle screw is on second step of fast idle cam (engine cold)
** Bend rod to adjust

ENGINE IDLE SPEED

Manual Trans. 600 rpm
Auto. Trans. 500 rpm in DRIVE
Air Cond. Manual Trans. 600 rpm; Auto. Trans. 500 rpm in DRIVE; with unit turned ON and hot idle compensator held shut, if so equipped

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, make initial adjustment as follows:

1. Turn adjusting screw to produce a 14-20 lb. drag on outside of tire
2. With small screw driver hold adjuster lever away from adjusting screw and back off adjustment 26 notches. Drum should turn freely without drag
3. Repeat procedure at each wheel

Bleeding sequence: LF, RF, LR, RR

PONTIAC TEMPEST SIX—1964-'65; TEMPEST V-8—1964-'66

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California cars

BATTERY

	AABM Group No.	Amp. Hrs.
6-cyl.	22F	44
V-8: 8.6:1, 9.2:1 CR engs.	24	53
Air conditioning	24	61
Others	24	61
	24T	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

1964 6-cyl. 140*
1964 V-8: 8.6:1 CR engine. 140-160*
10.5 1 10 75 1 CR engs. 170-190*
1965 66 No cylinder should be less than 80% of the highest cylinder
* Lowest cylinder pressure should be within 80% of highest cylinder

SPARK PLUGS

AC: 6-cyl. 46N; V-8 45S except GTO, 44S
Gap: .033"-.038" (.035" preferred)
Torque: 15-25 ft. lb.

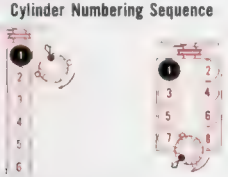
IGNITION POINTS

Delco
Gap: .019" new; .016" used
Dwell angle: 6-cyl. 31°-34°; V-8, 28°-32° (30° preferred)

CONDENSER

Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

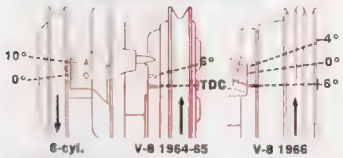


Firing Order: 6-cyl. **1, 5, 3, 6, 2, 4**
V-8 **1, 8, 4, 3, 6, 5, 7, 2**

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug
4. Disconnect distributor vacuum line and tape line opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at harmonic balancer and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6-cyl. 4° (Each line equals 2°)
V-8, 6°*
* California car with Air Injection Reactor System: Manual Trans. 4° ATDC; Auto. Trans. 6° BTDC

FUEL PUMP

AC: 6-cyl., mechanical; V-8 1964-65, model 6542; 1966, model 40239
Pressure: 6-cyl. 3½-4½ lb. at 500-1000 rpm
V-8, 5¼-6¾ lb. at 1000 rpm; tested at carburetor height
Volume: Not required

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER 4-bbl. AFB	1	1 rich	1 rich
ROCHESTER 1-bbl. BV	1½	*	*
2-bbl. 2GC	1½	index	index

* Bend choke rod for adjustment

ENGINE IDLE SPEED

Manual Trans. 6-cyl., 580-600 rpm; V-8, 600 rpm; A.I.R. 700 rpm
Auto. Trans. 6-cyl., 480-500 rpm; V-8, 500 rpm*; A.I.R. 600 rpm; in DRIVE
Air Cond.: Manual Trans. 6-cyl., 580-600 rpm; V-8, 1964-65 660 rpm; 1966 700 rpm; A.I.R. 700 rpm. Auto. Trans. 6-cyl., 480-500 rpm; V-8, 575 rpm**; A.I.R. 600 rpm; in DRIVE with unit turned OFF and hot idle compensator held shut, if so equipped
* Tri-Carb. eng. 600 rpm
** Tri-Carb. eng. 675 rpm

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, make initial adjustment as follows:

1. Turn adjusting screw to produce a 14-20 lb. drag on outside of tire
2. With small screw driver hold adjuster lever away from adjusting screw and back off adjustment 30 notches (1964-65), 26 notches (1966). Drum should turn freely without drag
3. Repeat procedure at each wheel

Bleeding sequence: LF, RF, LR, RR

KEY

- Conoco Super Lube
- TA Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

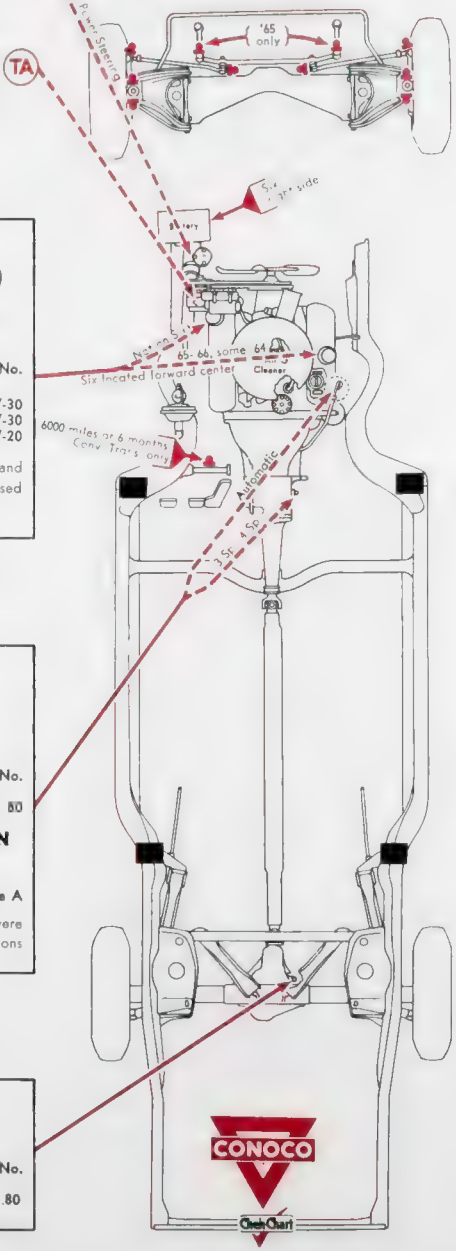
STEERING GEAR

Every 6000 miles or 6 months. Remove cap screw and check level

POWER STEERING RESERVOIR (TA)

Every 6000 miles or 6 months. Check level. Maintain level between FULL and ADD marks on dipstick

Lubricate front suspension and steering linkage every 6 months or 6000 miles



CRANKCASE

GTO (5 qts.) '64 V-8, '64-'65 Six (4 qts.)
'65 V-8 (5 qts.) '66 V-8 (6 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap elements in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

TRANSMISSION

3-Speed: Six, '64-'65 V-8 (1¾ pts.)
'66 V-8 (3½ pts.)
3-Speed H.D. (2¾ pts.)
4-Speed (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

AUTOMATIC TRANSMISSION

(Approx. 3 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 24,000 miles, severe service 12,000 miles. See General Instructions

REAR AXLE (3 pts.)

(Also includes Safe-T-Track axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

COOLING SYSTEM: Six: '64, 11¼ qts., '65, 13½ qts. V-8 20½ qts. '66 with air conditioning 22 qts.

SPECIAL SERVICES

AIR CLEANER

Wash element in kerosene every 6000 [illegible] dry and wet with CONOCO Super [illegible] OIL SAE No. 50

AIR CLEANER—POLYURETHANE

Remove polyurethane element every [illegible] miles, clean in kerosene and squeeze [illegible] in CONOCO ALL SEASON S[illegible] MOTOR OIL SAE No. 10W-30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

CRANKCASE VENTILATOR VALVE

Install new element every 6000 miles

FUEL FILTER

Fuel filter element in carburetor clean every 12,000 miles. Fuel filter element in fuel line replace every 12,000 [illegible] fuel line is not a filter [illegible]

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT HYDRO-LECTRIC MECHANISM

Refer servicing to Authorized Agency.

GAS TANK: 21½ gals.

RAMBLER CLASSIC SIX—1962-'66; AMBASSADOR SIX—1965-'66; MARLIN SIX—1965-'66

KEY

- Conoco Super Lube M
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

Repack front suspension, steering linkage and clutch operating levers every 32,000 miles, severe service every 12,000 miles or yearly. '66 clutch operating levers, remove rubber cap, lubricate with Conoco Super Motor Oil SAE No. 20-20W and coat pivot points with Conoco Super Lube M
CAUTION: Apply sparingly. See General Instructions

POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level halfway up filler neck

CRANKCASE (4 qts.)
Drain and refill: 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

STEERING GEAR
Every 4000 miles. Remove plug ('62-'64) or cap screw ('65-'66) and check level

TRANSMISSION
196, 199 cu. in. engines,
'66 232 cu. in. engine (1½ pts.)
'65 232 cu. in. engine (2¼ pts.)

TRANS. WITH OVERDRIVE
196, 199 cu. in. engines,
'66 232 cu. in. engine (2¾ pts.)
'65 232 cu. in. engine (3½ pts.)

Individual drain and fill plugs

Conoco Super Motor Oil SAE No.

All temperatures	20-20W

FLASH-O-MATIC TRANS. (9 qts.)
Conoco Automatic Transmission Fluid Type A

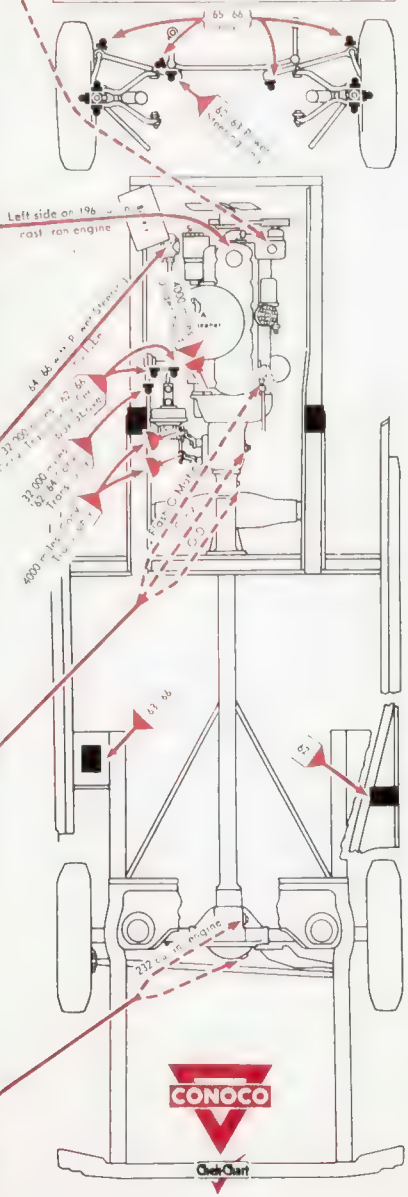
Drain and refill: '62 every 24,000 miles. See General Instructions

REAR AXLE
196, 199 cu. in. engines (3 pts.)
232 cu. in. engine (4 pts.)

(Also includes Twin-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90



COOLING SYSTEM: 9½ qts. (with heater 10½ qts.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—AIR PUMP
(California cars only) Replace air filter every 12,000 miles.

CRANKCASE VENTILATOR VALVE
Install new valve every 8000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles.

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency

GAS TANK: '62, 20 gals., '63-'66 3-seat Station Wagon 17 gals., others 19 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	50
Air conditioning	24	60
1963-66 Optional	24H	70

COMPRESSION PRESSURE
(at cranking speed with throttle open)

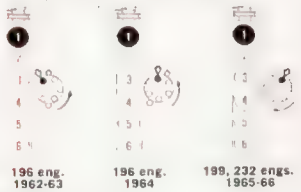
	psi
All ..... minimum	145

SPARK PLUGS
Champion: 196 eng., H-14Y; 199, 232 engs., N-14Y
Gap: .033"-.037" (.035" preferred)
Torque: 25-30 ft. lb

IGNITION POINTS
Delco
Gap: .016"
Dwell angle: 1962, 28 -35 (30 preferred)
1963-66, 31 -34

CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

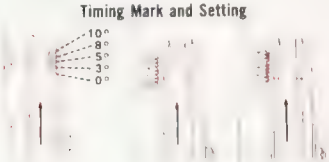


196 eng. 1962-63 | 196 eng. 1964 | 199, 232 engs. 1965-66

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Set idle speed with transmission in NEUTRAL
5. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
6. Reset to proper idle speed

Timing Mark and Setting



1962 65 196 eng. | 1964-65 | 1966 199, 232 engs.

Timing Setting (Before Top Dead Center):
196 engine, 1964 models, engine code numbers 510B30 and 510C30 and later: Regular fuel, 5°; Premium fuel, 12
1965 199 engine: Regular fuel, Man. Trans. 5°, Auto. Trans., 10°; Premium fuel, Man. Trans. 8°, Auto. Trans. 14°
All other engines: Regular fuel, 5°; Premium fuel, 8
California cars with air pump, 0° * 1

FUEL PUMP
Carter mechanical
Pressure: 4-5½ lb. at 500 rpm
Volume: 1 quart in 1 minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
1-bbl. AS	¼-1¼	—	index
1-bbl. RBS	1-1¼	index	index
2-bbl. WCD	½-2	index	index
HOLLEY			
1-bbl. 1908	1	index	—
1-bbl. 1909	0-2¾	1 lean	—
1-bbl. 1931	*	index	index

* Type 2697-1, ¼-2¼; type 2880, ¼-1¼

ENGINE IDLE SPEED
Manual Trans. 550 rpm
Auto. Trans. 550 rpm in NEUTRAL
Air Cond. 500 rpm in NEUTRAL with unit turned ON

VALVE CLEARANCES
(engine hot and running)
196, iron block engine: Intake .012", exhaust .016"
196, aluminum block engine; 199, 232 engines: Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting drum brakes: Adjustment is not normally required
Bleeding sequence: RR, LR, RF, LF

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	50
Air conditioning	24H	60
1963 Optional H.D.	24H	70

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
L-head engine .... minimum 130
OHV engine .... minimum 145

SPARK PLUGS
Champion: L-head, H-10; OHV, H-18Y
Gap: .033"-.037"
Torque: 25-30 ft. lb.

IGNITION POINTS
Autolite, Delco
Gap: Autolite, .018"-.022"; Delco, .016"
Dwell angle: Autolite, 36°-42°; Delco 1961-62, 28°-35°, 1963, 31°-34

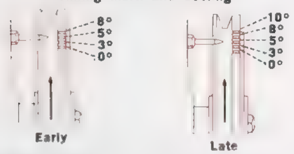
CONDENSER
Autolite, Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Set idle speed with transmission in NEUTRAL
5. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
6. Reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
Regular fuel: L-head, 3°; OHV, Manual Trans., 8°; Auto. Trans. 10
Premium fuel: L-head, 6°; OHV, Manual Trans., 12°; Auto. Trans., 14

FUEL PUMP
Carter mechanical
Pressure: 4-5½ lb.; 1961-62 at 1800 rpm, 1963 at 500 rpm
Volume: 1 quart in 1 minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
1-bbl. YF	½-1½	1 lean	1 lean
1-bbl. RBS	¼-1¼	index	index
2-bbl. WCD	½-1½	index	index
HOLLEY			
1-bbl. 1908	1¼	3 lean	3 lean
1-bbl. 1909	0-2¾	index	index

ENGINE IDLE SPEED
Manual Trans. 550 rpm
Auto. Trans. 500 rpm in NEUTRAL
Air Cond. 500 rpm in NEUTRAL with unit turned Off

VALVE CLEARANCES
(engine hot and running)
OHV engine: Intake .012"; exhaust .016"
(engine cold, not running)
L-head engine: Intake .016", exhaust .018"

BRAKE ADJUSTMENT

1961: With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:
1. Using a suitable tool inserted into the adjustment opening in the backing plate, expand the shoes until the drum cannot be rotated by hand
2. Back off the adjuster 8 notches (10 notches if new linings are installed)
3. Repeat the procedure at each wheel

1962-63: Brakes are self-adjusting. No adjustment normally required. If the brakes have been relined or the adjustment disturbed, proceed as follows:
1. Using a suitable tool inserted into adjusting hole in backing plate, turn star wheel until drum is locked. (A second tool may be required to hold adjusting lever away from star wheel)
2. Back off star wheel 15-20 notches
3. Repeat steps 1 and 2 at each wheel

Bleeding sequence: RR, LR, RF, LF

RAMBLER SIX AMERICAN—1961-'63

KEY

- Conoco Super Lube
- (90) Conoco Universal Gear Lubricant SAE No. 90
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

POWER STEERING RESERVOIR (TA)
Check level. '61 maintain level to bottom of filler neck. '62-'63 maintain level halfway up filler neck

DISTRIBUTOR OIL CUP

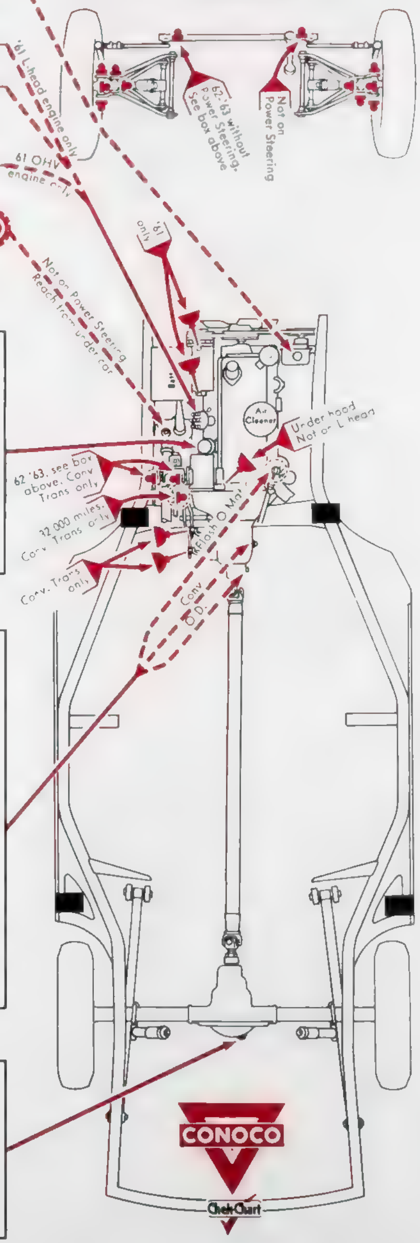
DISTRIBUTOR CAM CENTER
Every 5000 miles. Under rotor—4 drops on wick

DISTRIBUTOR RESERVOIR
Every 10,000 miles. Remove plug and fill

STEERING GEAR (90)
Remove plug and fill

1962-'63 models. Repack pitman arm stud and clutch operating levers with CONOCO SUPER LUBE M every 32,000 miles. **CAUTION:** Apply sparingly. See General Instructions

COOLING SYSTEM: L-head engine 11 qts. Overhead valve engine 10 qts. (with heater add 1 qt.)



CRANKCASE (4 qts.)
Drain and refill: 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and reoil with crankcase grade

TRANSMISSION (1½ pts.)
TRANS. WITH OVERDRIVE (2¾ pts.)
Individual drain and fill plugs

Conoco Super Motor Oil SAE No.

All temperatures 20-20W

FLASH-O-MATIC TRANS.
'61 (10 qts.) '62-'63 (9 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '61-'62 every 24,000 miles. See General Instructions

REAR AXLE (3 pts.)
(Also includes Twin-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

AIR CLEANER—OIL BATH TYPE
Clean base every 2000 miles. Fill to level [illegible] with 1 pt. CONOCO Super M[illegible] SAE No 50. Summer: SAE No 20W. W[illegible]

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, dis[illegible]semble and clean every 8000 miles.

FUEL FILTER
Replace fuel filter element eve[illegible] 12,0[illegible]

OIL FILTER
Replace oil filter e[illegible] 4,0[illegible] miles or more often if [illegible]

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

AIR CONDITIONING UNIT
Refer servicing t[illegible] Authorized Agency

POWER BRAKE AIR CLEANER
Remove, wash and dry screen and curled hair element [illegible]y 10,000 miles

SPRINGS
Equipped with friction inserts. Do not lubricate.

SHOCK ABSORBERS
Direct acting type. Nonrefillable [illegible] requires replacement.

REAR WHEEL BEARINGS
Sealed type bearings

UNIVERSAL JOINTS
Sealed type bearings

GAS TANK: 20 gals.

RAMBLER SIX AMERICAN—1964-'66

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

POWER STEERING RESERVOIR (TA)
Every 4000 miles. Check level. Maintain level halfway up filler neck

STEERING GEAR (90)
Every 4000 miles. Remove plug and fill

Repack front suspension and steering linkage every 32,000 miles severe service 12,000 miles or yearly. **CAUTION:** Apply sparingly. See General Instructions

CRANKCASE (4 qts.)

Drain and refill: 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

CLUTCH OPERATING LEVER
Every 32,000 miles. Disassemble, clean and repack both sides

TRANSMISSION (1½ pts.)
TRANS. WITH OVERDRIVE (2¾ pts.)

Individual drain and fill plugs

Conoco Super Motor Oil SAE No.

All temperatures 20-20W

FLASH-O-MATIC TRANS. (9 qts.)

Conoco Automatic Transmission Fluid Type A

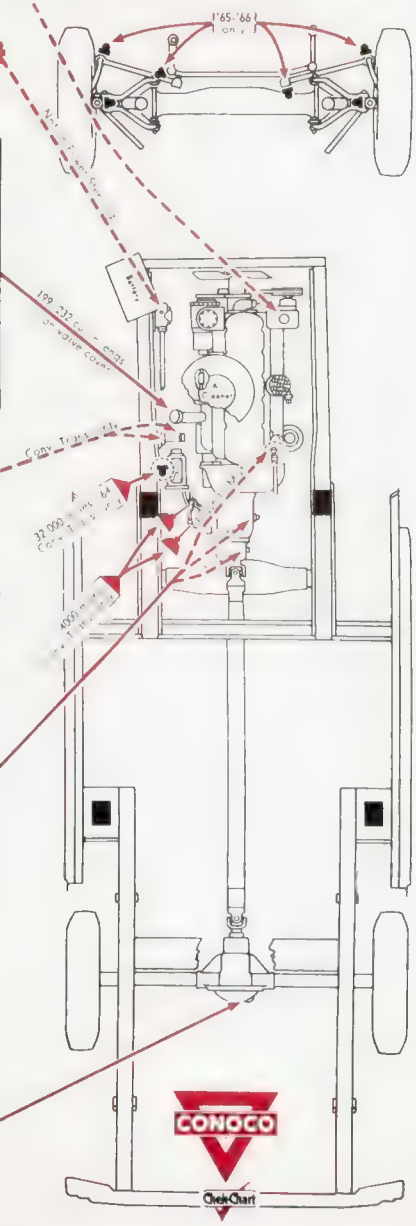
See General Instructions

REAR AXLE (3 pts.)

(Also includes Twin-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



COOLING SYSTEM: L-head engine 11 qts. 196 Overhead valve engine 10 qts. 199, 232 Overhead valve engines 9½ qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE

Clean base every 4000 miles. Fill to level mark with CONOCO Super MOTOR OIL SAE No. 50, Summer; SAE No. 20W, Winter.

AIR CLEANER—AIR PUMP

(California cars only) Replace air filter every 12,000 miles.

CRANKCASE VENTILATOR VALVE

Install new valve every 8000 miles.

FUEL FILTER

Replace fuel filter element every 12,000 miles.

OIL FILTER

Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR

Refer servicing to Authorized Agency.

SPRINGS

Equipped with friction inserts. Do not lubricate.

GAS TANK: 16 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	50
Air conditioning	24	60
Optional	24H	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
L-head engine ..... minimum 130
OHV engines ..... minimum 145

SPARK PLUGS

Champion: L-head, H-10; 196 OHV, H-18Y; 199, 232 OHV, N-14Y
Gap: .033"-.037"
Torque: 25-30 ft. lb.

IGNITION POINTS

Delco
Gap: .016"
Dwell angle: 31 -34

CONDENSER

Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

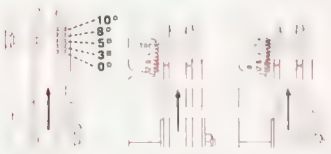
196 L-head | 196 OHV 1964-65 | 199, 232 OHV 1966

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Set idle speed with transmission in NEUTRAL
5. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
6. Reset to proper idle speed

Timing Mark and Setting



1964-65 L-head and 196 OHV | 1964-65 199, 232 engs. | 1966

Timing Setting (Before Top Dead Center)
Regular fuel: L-head, 3°; 196 OHV, Manual Trans. 8°; Auto. Trans. 10°; 232 OHV, 5°; 199 OHV, 10°
Premium fuel: L-head, 6°; 196 OHV: Manual Trans. 12°; Auto. Trans. 14°; 232 OHV, 8°; 199 OHV, 13°
California cars with air pump, 199, 232 engs., 0° ± 1°

FUEL PUMP

Carter mechanical
Pressure: 4-5½ lb. at 500 rpm
Volume: 1 quart in 1 minute at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
1-bbl. RBS	¼-1¼	index	index
2 bbl. WCD	½-2	index	index
HOLLEY			
1-bbl. 1909	0-2¾	index	index

ENGINE IDLE SPEED

Manual Trans. 550 rpm
Auto. Trans.: L-head, 196 OHV 500 rpm; 199, 232 OHV 550 rpm; in NEUTRAL
Air Cond. 500 rpm in NEUTRAL; unit turned ON

VALVE CLEARANCES

(engine hot and running)
196 OHV: Intake .012"; exhaust .016"
(engine cold, not running)
L-head: Intake .016"; exhaust .018"
199, 232 OHV: Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes
Adjustment is not normally required. If the brakes have been relined or the adjustment disturbed, proceed as follows:

1. Using a suitable tool inserted into adjusting hole in backing plate, turn star wheel until drum is locked
2. Back off star wheel 15-20 notches. (A second tool may be required to hold adjusting lever away from star wheel)
3. Repeat steps 1 and 2 at each wheel

Bleeding sequence: RR, LR, RF, LF

RAMBLER CLASSIC V-8; AMBASSADOR V-8—1962-'66; MARLIN V-8—1965-'66

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	60
1963-66 Optional	24H	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
All ..... minimum 145

SPARK PLUGS

Champion H-14Y
Gap: .033"-.037" (.035" preferred)
Torque: 25-30 ft. lb.

IGNITION POINTS

Delco, Prestolite
Gap: Delco .016"; Prestolite .018"-.022"
Dwell angle: 28°-32°

CONDENSER

Delco, Prestolite
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

1962 1963-66

Firing Order: 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Set idle speed with transmission in NEUTRAL
5. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
6. Reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
1962-64 Ambassador:
Regular fuel: 2-bbl. carb., Manual Trans. TDC; Auto. Trans. 5°
Premium fuel: 2-bbl. carb., Manual Trans. 3°; Auto. Trans., 8°; 4-bbl. carb., 5°
1962-64 Classic:
Regular fuel: Manual and Auto. Trans. 5
Premium fuel: Manual and Auto. Trans. 8°
1965-66 Ambassador, Classic, Marlin
287, 327 2-bbl. engs. Regular fuel 5°; Premium fuel 8°
327 4-bbl. eng. Premium fuel 5°
California cars with air pump, 0° ± 1

FUEL PUMP

Carter mechanical
Pressure: 4-5½ lb. at 500 rpm
Volume: 1 quart in 1 minute or less at 500 rpm

CARBURETOR ADJUSTMENT

HOLLEY	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
2-bbl. 2300	1	index	index
4-bbl. 4150	½-1½	1 lean	1 lean
4-bbl. 4160	½-1½	1 lean	1 lean
2-bbl. 2209	½-1½	index*	index*

* 1965-66, 2 rich

ENGINE IDLE SPEED

Manual Trans. 550 rpm
Auto. Trans. 1962-63 475 rpm, 1964-65 500 rpm, 1966 550 rpm; in NEUTRAL
Air Cond. 1962-65 500 rpm, 1966 550 rpm; in NEUTRAL with unit turned ON

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting drum brakes: Adjustment is not normally required
Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube M
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- TA — Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

Repack front suspension, steering linkage and clutch operating levers every 32,000 miles, severe service every 12,000 miles or yearly. **CAUTION:** Apply sparingly. See General Instructions

CRANKCASE (4 qts.)

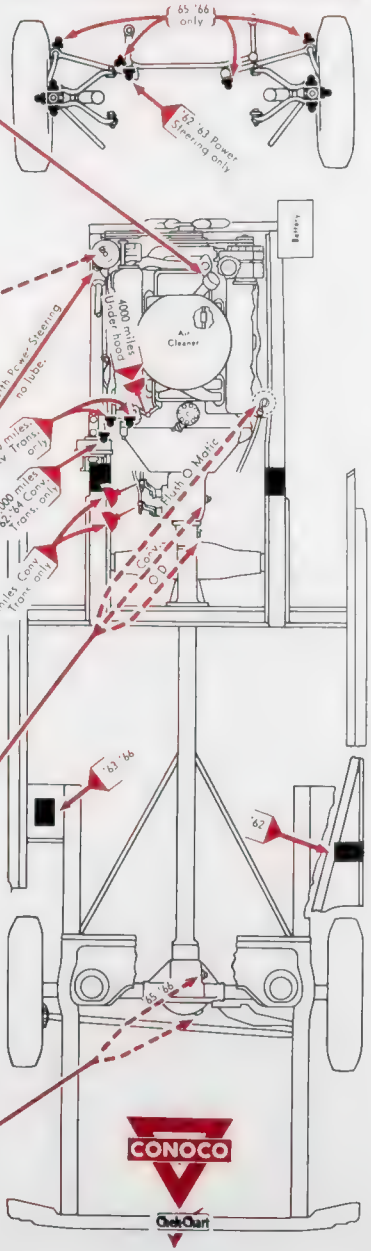
Drain and refill: 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

COOLING SYSTEM: 18 qts. (with heater 19 qts.)



TRANSMISSION

62-'65 3-Speed 287 cu. in. eng. (3½ pts.)
'66 3-Speed 287 cu. in. eng. (2½ pts.)
3-Speed 327 cu. in. eng. (4 pts.)
4-Speed (3½ pts.)

TRANS. WITH OVERDRIVE

'62-'65 287 cu. in. engine (3½ pts.)
'66 287 cu. in. engine (3¾ pts.)
327 cu. in. engine (4 pts.)

Individual drain and fill plugs

Conoco Super Motor Oil SAE No.

All temperatures	20-20W

FLASH-O-MATIC TRANS. (11 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '62 every 24,000 miles. See General Instructions

REAR AXLE (4 pts.)

(Also includes Twin-Grip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—AIR PUMP
(California cars only) Replace air filter every 12,000 miles

CRANKCASE VENTILATOR VALVE
Install new valve every 8000 miles.

FUEL FILTER
Replace fuel filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency.

GAS TANK: '62, 20 gals., '63-'66 3-seat Station Wagon 17 gals., others 19 gals.

STUDEBAKER SIX, V-8—1965-'66

KEY

- Conoco Super Lube
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood

Lubricate front suspension and steering linkage: Fittings every 6000 miles; plugs (insert fittings to lubricate) every 24,000 miles. **CAUTION:** Apply sparingly. See General Instructions

POWER STEERING RESERVOIR (TA)
Every 6000 miles. Check level. Maintain to level mark

CRANKCASE (4 qts.)
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

STEERING GEAR
Every 6000 miles. Remove plug and fill

3-SPEED TRANSMISSION
Six (2¼ pts.) V-8 (3¾ pts.)
4-SPEED TRANS. (2½ pts.)
TRANS. WITH OVERDRIVE
(4 pts.)
Individual drain and fill plugs

Conoco Super Motor Oil SAE No.

All temperatures	20-20W

CAUTION: Fill slowly. Recheck level after short operation

FLIGHTOMATIC TRANS.
Six (9 qts.) V-8 (9½ qts.)

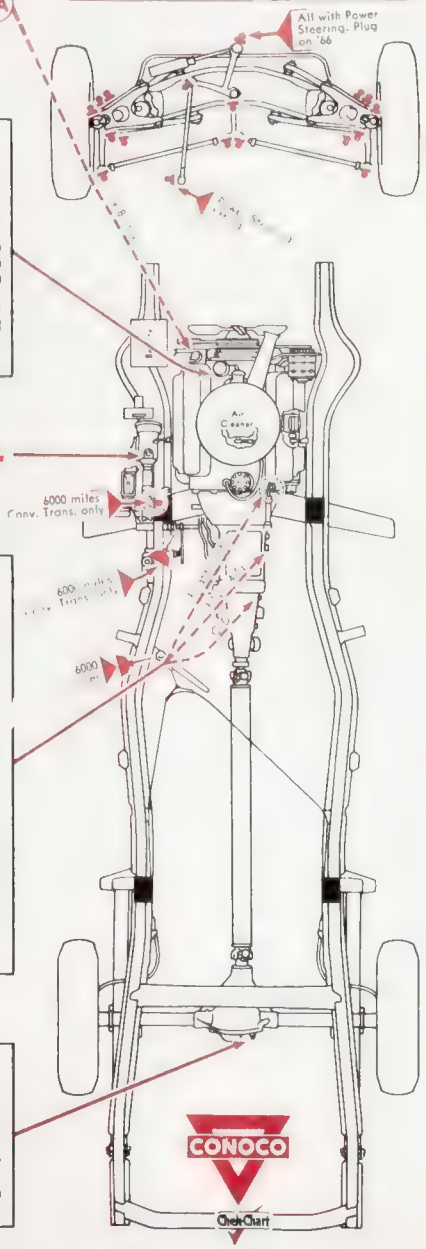
Conoco Automatic Transmission Fluid Type A

See General Instructions

REAR AXLE
Six (2½ pts.) V-8 (3 pts.)
(Also includes Twin-Traction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90



COOLING SYSTEM: Six 12½ qts. V-8 15 qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 6000 miles. Fill to level mark with 1 pt. CONOCO Super MOTOR OIL SAE No. 50, Summer; SAE No. 20W, Winter.

CRANKCASE VENTILATING SYSTEM
Clean metered orifice and hose every 6000 miles

FUEL FILTER
Fuel filter element in carburetor inlet, clean every 6000 miles, replace every 12,000 miles

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty

WHEEL BEARINGS
FRONT and REAR
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES
SPEEDOMETER CABLE
See General Instructions.

AIR CONDITIONING UNIT
DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency.

SPRINGS
Equipped with friction inserts. Do not lubricate.

UNIVERSAL JOINTS
Every 30,000 miles. See General Instructions

GAS TANK: 17 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	53

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
6-cyl.	130
V-8	150

SPARK PLUGS
AC: 6-cyl. 46N; for continuous heavy duty operation, 44N; V-8 45, for heavy duty operation, 44
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new
Dwell angle: 6-cyl., 31°-34°; V-8, 28°-32°

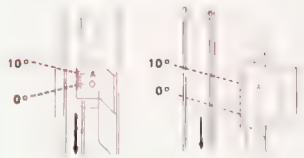
CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 6-cyl. 1, 5, 3, 6, 2, 4
V-8 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



6-cyl. V-8

Timing Setting (Before Top Dead Center):
6-cyl., 1965, 8°; 1966, 4°; V-8, 4° (Range 3°-5°)
(Each line equals 2°)

FUEL PUMP
AC mechanical
Pressure: 6-cyl., 3½-4¼ lb.; V-8, 5¼-6½ lb. at idle to 1000 rpm
Volume: One pint in 30-45 seconds at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
4-bbl. AFB	1	index	index
ROCHESTER			
1-bbl. BV	1½	**	**
2-bbl. 2GV	1½	*	*

* One-half rod diameter above top of hole in choke lever

** One rod diameter above top of hole in choke lever

ENGINE IDLE SPEED
Manual Trans.: 525 rpm
Auto. Trans.: 500-520 rpm; in DRIVE

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF If equipped, bleed power brake first, then Hill-Holder, then wheel cylinders

STUDEBAKER SIX, V-8 EXCEPT AVANTI—1964

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	53

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi:

Jet Thrust (JT)	185-195
Jet Thrust Supercharged (JTS)	160-170
Others	140-160

SPARK PLUGS

Champion: Jet Thrust, Supercharged, Normal driving, J-12Y; High-speed driving, J-10Y; Others, H-14Y
Gap: JT, JTS engines, .030"; Others, .033"-.038" (.035" preferred)
Torque: 6-cyl. 25-30 ft. lb.; V-8 30 ft. lb.

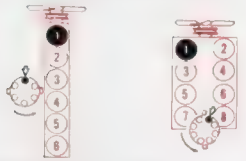
IGNITION POINTS

Prestolite
Gap: 6-cyl. .017"-.022"; V-8 JT, JTS engines .019"; others, .014"-.019"
Dwell angle: 6-cyl. 37°-41°; V-8 JT, JTS engines, each set of dual points, 22°-26°, total dwell, 32°-36°; Others, 27°-31°

CONDENSER

Prestolite
Capacity: .21-.25 mfd

Cylinder Numbering Sequence



Firing Order: 6-cyl. 1, 5, 3, 6, 2, 4
V-8 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed* with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

* JTS, 1600 rpm

Timing Mark and Setting

6-cyl. Jet Thrust Jet Thrust Supercharged Other V-8

Timing Setting (Before Top Dead Center):
6-cyl. 2°
V-8: Jet Thrust Supercharged, 24° at 1600 rpm
Others, 4° at idle rpm

FUEL PUMP

AC mechanical, 6-cyl.; Carter mechanical, V-8
Pressure: JT, JTS, 5½-7 lb. at 1000 rpm; Others, 4-5½ lb. at 1800 rpm
Volume: Minimum 1 pint; JT, JTS in 15 seconds at idle rpm, Others in 30 seconds at 4000 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
CARTER			
1-bbl. RBS	1	index	index
4-bbl. AFB	1	index	index
STROMBERG			
2-bbl. WW	1¼	index	index

ENGINE IDLE SPEED

Manual Trans.: 6-cyl. 550-600 rpm; V-8 JT, JTS 650 rpm, others 550-575 rpm
Auto. Trans. in NEUTRAL: 6-cyl. 575-590 rpm; V-8 JT, JTS 650 rpm, others 550 rpm
Air Cond. in NEUTRAL with unit turned ON: 6-cyl. 590 rpm; V-8 JT, JTS 650 rpm, others 550 rpm

VALVE CLEARANCES

(engine hot and running)
JT, JTS engines: Intake .025"-.027"; exhaust .025"-.027"; Others: Intake .023"-.025"; exhaust .023"-.025"

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF If equipped, bleed power brake first, then Hill-Holder, then wheel cylinders

KEY

- Conoco Super Lube
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage Fittings every 6000 miles; plugs (insert fittings to lubricate) every 24,000 miles. **CAUTION:** Apply sparingly. See General Instructions

SUPERCHARGER (TA)
Every 2000 miles. Check fluid level with dipstick. Maintain to level mark

POWER STEERING RESERVOIR (TA)
Every 6000 miles. Remove cover. Maintain to level mark on reservoir or cover

CRANKCASE (5 qts.)
Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap elements in kerosene, dry and recoil with crankcase grade. Models with closed PCV system no service

STEERING GEAR (90)
Hawk
All others
Every 6000 miles. Remove plug and fill

DISTRIBUTOR OIL CUP
Every 6000 miles

DISTRIBUTOR CAM CENTER
Every 6000 miles. Under rotor—4 drops on wick

3-SPEED TRANSMISSION
Six (2¼ pts.) V-8 (3¾ pts.)

4-SPEED TRANS. (2½ pts.)

TRANS. WITH OVERDRIVE
(4 pts.)

Individual drain and fill plugs

Conoco Super Motor Oil SAE No.

All temperatures 20-20W

CAUTION: Fill slowly. Recheck level after short operation

FLIGHTOMATIC TRANS.
(9 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

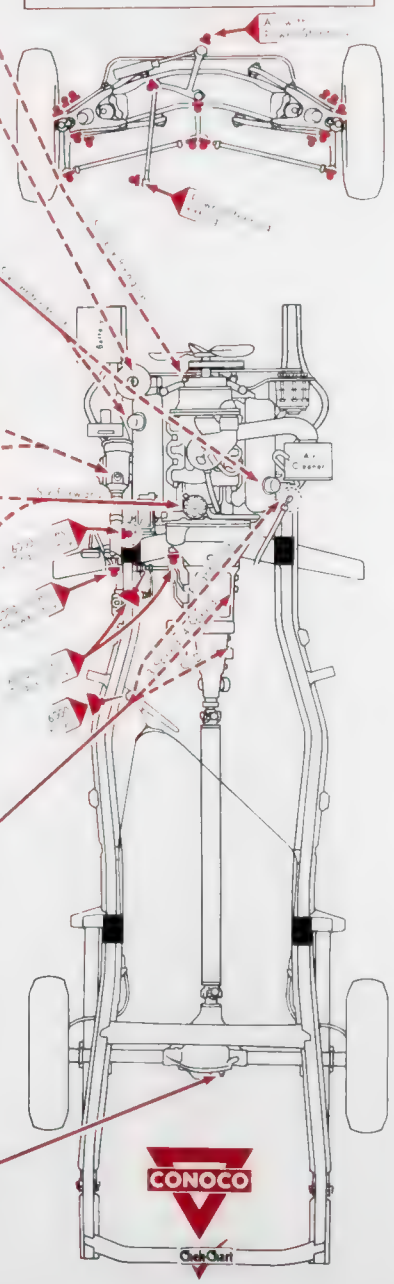
REAR AXLE

Hawk, V-8 Station Wagon (3 pts.)
Others (2½ pts.)

(Also includes Twin-Traction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



COOLING SYSTEM: [illegible] 11 qts. V-8 17 qts. (with heater add 1 qt.)

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles

AIR CLEANER—OIL BATH TYPE
[illegible]

CRANKCASE VENTILATOR VALVE
[illegible]ble and clean every 6000 m[illegible]

FUEL FILTER
[illegible]

OIL FILTER
[illegible]

WHEEL BEARINGS
FRONT and REAR
[illegible] CON[illegible]

HYDRAULIC BRAKES
SPEEDOMETER CABLE
[illegible] General Instruc[illegible]

AIR CONDITIONING UNIT
Refer servicing to Authorized Agency

POWER BRAKE VACUUM CYLINDER
(Models with Power Brakes) Every 24,000 miles CONOCO NEAT[illegible]

SPRINGS
Equipped with friction inserts [illegible] rate

UNIVERSAL JOINTS
Every 30,000 miles. See General [illegible]

GAS TANK: 18 gals.

CHEVROLET TRUCKS

SIX AND EIGHT

SERIES C10 (½ TON), C20 (¾ TON)—1960-'66
SERIES P10 (½ TON)—1963-'66

KEY

- Conoco Super Lube
- Conoco Super Lube Fitting on some models only
- (SG) Conoco Steering Gear Grease
- (TA) Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

POWER STEERING RESERVOIR (TA)

Check fluid level with dipstick. Maintain level to "F" mark

STEERING GEAR

60-'64, early '65, remove plug and fill. Late 65-'66, remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out of other hole. Replace screws

CRANKCASE

Six 230 250 cu. in. engs. (4 qts.) Others (5 qts.)
Eight 327 cu. in. eng. (5 qts.) Others (4 qts.)
P10 Six (4 qts.) 4 Cyl. (3½ qts.)

Drain and refill: '64-'66—60 days or 6000 miles
'62-'63—60 days or 4000 miles
'60-'61—60 days or 2000 miles

See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

DISTRIBUTOR GREASE CUP

DISTRIBUTOR OIL CUP

TRANSMISSION (2 pts.)

Opt. 3-Speed H.D. (2¾ pts.)
Opt. 4 Speed (6¼ pts.)

Conoco Universal Gear Lubricant SAE No.

Above +10°F.	90
Below +10°F.	80

Drain and refill: '60-'63 every 10,000 mile

POWERGLIDE

60-'62 (4½ qts.) '63-'66 (2 qts.)

'66 TURBO HYDRA-MATIC (3¾ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE

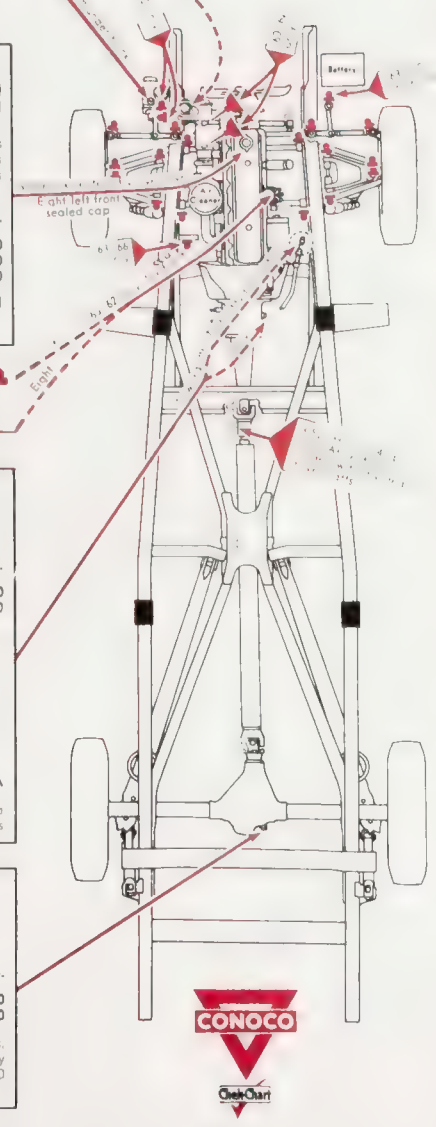
½ ton (4½ pts.) ¾ ton (6½ pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

Above +10°F.	90
Below +10°F.	80

Drain and refill: '60-'63 every 15,000 miles, severe service 10,000 miles. '64-'66 C20 every 24,000 miles; '64-'66 severe service 12,000 miles



COOLING SYSTEM: Quarts

	1960-'61	1962
6 Cyl.	17	17¼
8 Cyl.	17½	17¾

Heavy-Duty, add ½ qt., Powerglide ¾ qt.

	C10 Std.	C10 P.G.	C10 H.D.	C20 Std.	C20 P.G.	C20 H.D.
1963						
230 eng.	11	12	12	11	12	12
250 eng.	...	...	...	12	13	13
292 eng.	13	13½	13½	13½	13½	14
283 eng.	14	15½	15½	15½	15½	16
327 eng.	...	...	...	19	19½	
1964-'66						
230 eng.	12	13½	13	12	13½	13
292 eng.	13½	14	14	13½	14	15
283 eng.	18	18½	19½	18	18½	19½

P10

	1963	1964-'66
4 Cyl.	8¼	9½
6 Cyl.	14	12½

	8¼	8¼	...	9½	9½	
	14	14	...	12½	12½	

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE
Remove polyurethane element every 5000 miles, clean in kerosene and squeeze dry. Dip in CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W 30, remove excess oil and reinstall.

AIR CLEANER—DRY TYPE
Replace element every 10,000 miles

AIR CLEANER—OIL BATH TYPE
Clean base every 2000 miles. Fill to level mark with CONOCO Super MOTOR OIL SAE No. 50. Summer: SAE No. 20W, Winter.

SPINNER GOVERNOR AIR CLEANER
Replace element every 10,000 miles.

CRANKCASE VENTILATOR
64-'65 Valve type: Install new valve every 6000 miles; orifice type, clean hose and fittings as required. '66 install new valve every 6000 miles. Also clean hose and fittings. Others disassemble and clean valve every 6000 miles.

FUEL FILTER
Replace fuel filter element in carburetor inlet only if flooding occurs ('62 Eight, all '63-'66) every 5000 miles ('60-'61 Eight)

OIL FILTER
Replace oil filter element at least every 4000 miles, more often if oil becomes dirty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

HYDROVAC CYLINDER AND AIR CLEANER DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency

GAS TANK: '60-'62, 17½ gals. '63-'66 18½ gals. P10 20 gals.

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California vehicles

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44
	24T	70

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
All	130

Maximum variation between cylinders, 20 psi

SPARK PLUGS
AC 46N; for continuous heavy-duty operation, 44N
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new
Dwell angle: 31°-34

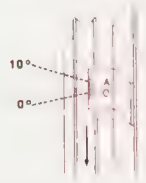
CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order:
4-cyl. 1, 3, 4, 2
6-cyl. 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 500 rpm
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
4-cyl.: 4 (Range, 4°-8°)
6-cyl.: 194 eng. 8 (Range, 6 -10); 230 eng. 4°; with A.I.R. and Manual Trans., 3
(Each line equals 2°)

FUEL PUMP
AC mechanical; 1966, model KA
Pressure: 3½-4½ lb. at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
CARTER	
1-bbl. YF	1½

ENGINE IDLE SPEED
Manual Trans. 450-500 rpm; with A.I.R., 700 rpm
Auto. Trans. 450-500 rpm; with A.I.R., 600 rpm; in DRIVE. Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required

Bleeding sequence: LR, RR, RF, LF

VOLKSWAGEN 1200, 1300 SERIES EXCEPT TRUCK AND STATION WAGON—1953-'66

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	19L (6-volt)	77

COMPRESSION PRESSURE
(at cranking speed, throttle open, eng. hot) psi

25-hp engine 85-105
36-hp engine 100-120
40-hp engine 100-128
50-hp engine 107-135

SPARK PLUGS

Beru 175 14; Bosch W175T1; Champion L-87Y preferred (L-85 may be used)
Gap: .024"-.028"
Torque: 22-29 ft. lb.

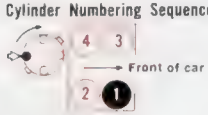
IGNITION POINTS

Bosch or VW
Gap: .016"
Dwell angle: Bosch distributor, 51°-55°; VW distributor, 48°-52°

CONDENSER

Bosch
Capacity: .25-.30 mfd

Cylinder Numbering Sequence



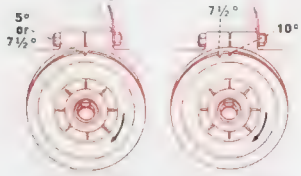
Firing Order: 1, 4, 3, 2

TIMING PROCEDURE

1. Connect 6-volt test lamp to distributor primary terminal and to ground
2. Turn pulley until notch is aligned with split in crankcase
3. Turn distributor housing until points just break, as indicated by the test lamp

Note: Due to nonsymmetrical distributor cam, 1965-66 models must be timed with No. 1 cylinder firing

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
Timing must be set with engine cold
1953, 5°; 1954-60, 7½°; 1961-65, 10°; 1966, 7½°
Notch aligned with split in crankcase
When pulley has two notches: 1953-65, use right notch, 1966, use left notch

FUEL PUMP

Solex or Pierburg
Pressure: 1953-60, 1.3-1.85 lb. at 1000-3000 rpm; 1961-66, 2½ lb. at 3000 rpm
Volume: 1953-60, 5½ ounces; 1961-63 early, 9 ounces; 1963 late -66, 13½ ounces, in 1 minute at 3000 rpm

CARBURETOR ADJUSTMENT

SOLEX	Idle Mixture (initial turns)	Choke (notches)
25-, 36-hp engines		
1 bbl. 28PCI	1¼-1½	manual
40-hp engine		
1-bbl. 28PICT	1¼-1½	index*
50-hp engine		
1-bbl. 30PICT	1¼-1½	index*

* During warm season, above +68°, air control damper should be locked "open"

ENGINE IDLE SPEED

500-550 rpm

VALVE CLEARANCES
(engine cold, approx. +122°, not running)

1200 models:
25-, 36-hp engine: Intake .004"; exhaust .004"
40-hp engine prior to engine No. 9205700: Intake .008", exhaust .012"
40-hp engine No. 9205700 and later: Intake .004"; exhaust .004"
1300 models:
50-hp engine: Intake .004"; exhaust .004"

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2", the need for service is indicated.
Two adjusters are provided in each brake.
Adjust the brakes as follows:

1. Raise car, remove hub caps, apply pedal firmly a few times, turn wheel until one adjuster is visible behind hole in drum
2. Turn each adjuster until the shoe makes light contact with the drum
3. Back off each adjuster 3-4 teeth until drum revolves freely without drag
4. Repeat procedure at each wheel
5. Depress pedal firmly a few times and recheck the adjustments

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

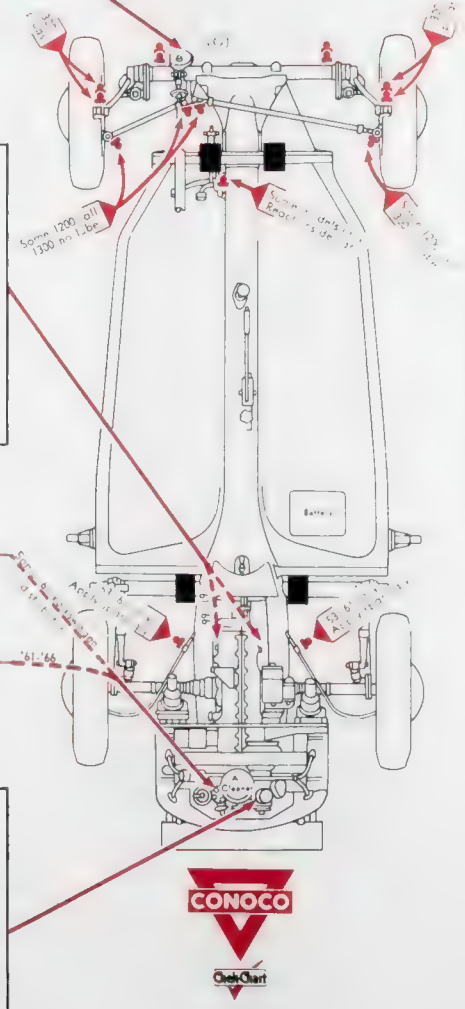
LIFTING PRECAUTIONS
Lift car to remove weight from front wheels when lubricating front axle assembly

STEERING GEAR (90) (SG)
'53-'64 plug
'65-'66 2 plastic plugs
Remove plug or plugs and fill
Under cover plate under front hood

TRANSAXLE
'53-'60 (4¼ pts.) '61-'66 (5¼ pts.)
Drain thru both plugs
Clean magnetic drain plugs. Fill slowly, allow 2 to 3 minutes for oil level to stabilize. Re check level before replacing fill plug
Conoco Universal Gear Lubricant SAE No.
All temperatures 90
Drain and refill: Every 15,000 miles

DISTRIBUTOR CAM CENTER
Under rotor. 4 drops on wick

DISTRIBUTOR PLATE
Every 5000 miles, 4 drops in groove at edge of breaker arm plate



CRANKCASE (2½ qts.)
Drain and refill: '62-'66—3000 miles
'53-'61—Winter—30 days
Summer—60 days
Do not exceed 3000 miles
See Page 1 for exceptions
Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-30

Wash filler cap element in kerosene, dry and recoil with crankcase grade

SPECIAL SERVICES

AIR CLEANER—OIL BATH TYPE
Clean base every 2000 miles [illegible] mark with ½ pt. CONO[illegible] OIL SAE No. 20-20W

OIL STRAINER
Remove, clean and replace every 3000 miles

CARBURETOR LINKAGE
Every 3000 m[illegible] all friction points sparingly with C[illegible] MOTOR OIL SAE No. 10W

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every [illegible] structions

HYDRAULIC BRAKES
Reservoir located under front hood. Maintain at least ¾ full with CONOCO HYDRAULIC BRAKE [illegible]

BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

ACCELERATOR CABLE
CLUTCH CABLE AND BALL JOINT HEATER CABLE
Coat cables with CONOCO SUPER LUBE every fall

GAS TANK: 10½ gals.

CHEVROLET TRUCKS SERIES G1200 CHEVY VAN, SPORTVAN—1964-'66

KEY

- Conoco Super Lube
- Conoco Super Lube Fitting on some models only
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

CRANKCASE

4 Cyl. (3½ qts.) 6 Cyl. (4 qts.)

Drain and refill: 60 days or 2000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

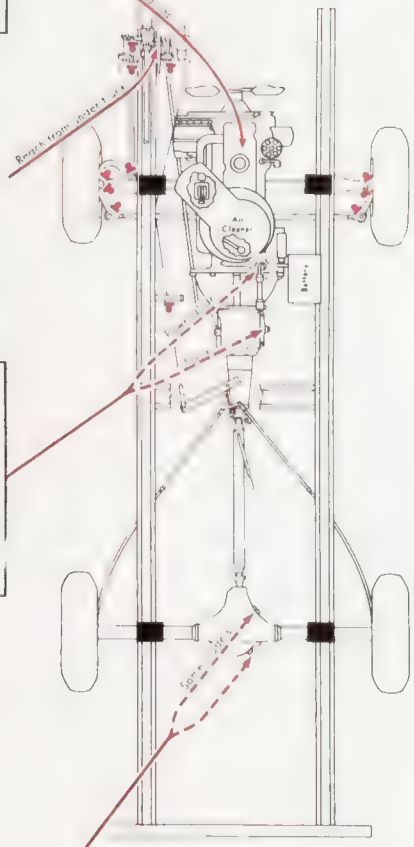
Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

Lubricate front suspension and steering linkage every 6000 miles or 6 months

COOLING SYSTEM: 4 Cyl. 9½ qts. 6 Cyl. 12 qts.

STEERING GEAR
Every 36,000 miles. Remove plug and fill



TRANSMISSION (2 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

POWERGLIDE (1½ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE

Heavy-Duty axle (4 pts.) Others (3½ pts.)
(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 2000 miles. Fill to level mark with CONOCO Super MOTOR OIL SAE No. 50, Summer; SAE No. 20W, Winter.

CRANKCASE VENTILATOR
('64-'65) Valve type, install new valve every 6000 miles; orifice type, clean hose and fittings as required. ('66) Install new valve every 6000 miles. Also clean hose and fittings.

FUEL FILTER
Replace fuel filter element in carburetor inlet only if flooding occurs.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency.

GAS TANK: 16 gals.

CONOCO Oil Chart

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California vehicles

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44
	24T	70

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
All	130

Maximum variation between cylinders, 20 psi

SPARK PLUGS
AC 46N; for continuous heavy-duty operation, 44N
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new
Dwell angle: 31°-34

CONDENSER
Delco
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order:
4-cyl. 1, 3, 4, 2
6-cyl. 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 500 rpm
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting

Timing Setting (Before Top Dead Center):
4-cyl.: 4° (Range, 4°-8°)
6-cyl.: 194 eng. 8° (Range, 6°-10°); 230 eng. 4°; with A.I.R. and Manual Trans., 3°
(Each line equals 2°)

FUEL PUMP
AC mechanical; 1966, model KA
Pressure: 3½-4½ lb. at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
CARTER	
1-bbl. YF	1½

ENGINE IDLE SPEED
Manual Trans. 450-500 rpm; with A.I.R., 700 rpm
Auto. Trans. 450-500 rpm; with A.I.R., 600 rpm; in DRIVE. Set speed as low as possible to obtain smooth idle without creep or harsh transmission shifts

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LR, RR, RF, LF

CHEVROLET TRUCKS CORVAIR 95, GREENBRIER—1961-'65

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1961-63	53	35, 42
1964-65	53	42

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi
All 130
Maximum variation between cylinders, 20 psi

SPARK PLUGS

AC: Turbo-Air, 46FF. Super Turbo-Air, 44FF
Gap .035" except 1964-65 Super Turbo-Air, .030"
Torque: 20 ft lb

IGNITION POINTS

Delco
Gap: .016" used; .019" new
Dwell angle: 31°-34

CONDENSER

Delco
Capacity: .18-.23 mfd

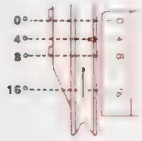
Cylinder Numbering Sequence

Firing Order: 1, 4, 5, 2, 3, 6

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
Turbo-Air: Manual Trans. 4° (Range 4°-8°)
Super Turbo-Air: Man. Trans. 12° (Range 12°-16°)
Automatic Trans. 12° (Range 12°-16°)
Note: Advance timing as far as possible within specifications, unless detonation (spark knock) occurs

FUEL PUMP

AC mechanical
Pressure: 4-5 lb. at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle rpm

CARBURETOR ADJUSTMENT

ROCHESTER	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
(2) 1-bbl. H	1½	manual*	manual*

* 1962, index: 1963-65, 2 turns up from free entry in choke lever

ENGINE IDLE SPEED

Manual Trans. Turbo-Air, 450-500 rpm. Super Turbo-Air, 600-650 rpm
Auto. Trans., 450-500 rpm in DRIVE. Set idle speed as low as possible to obtain smooth idle without creep or harsh transmission shifts

VALVE CLEARANCES

Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:
1961-62
1. Loosen parking brake cable adjustment nut
2. Using a suitable tool inserted into adjustment slot in backing plate, expand shoes until a heavy uniform drag is felt when revolving drum
3. Back off adjustment 12 notches on the front brakes and 15 notches on rear brakes
4. Repeat procedure at each wheel
5. Readjust parking brake cable

1963-65: Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LR, RR, RF, LF

KEY

- Conoco Super Lube
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Unless otherwise recommended, lubricate all points: '61-'62 every 1000 miles; '63-'65 every 6000 miles or 6 months

STEERING GEAR

Remove plug and fill

TRANSMISSION

3-Speed (2 pts.) 4-Speed (3 pts.)

Conoco Universal Gear Lubricant SAE No.

80

POWERGLIDE

(Approx. 3 qts.)

Conoco Automatic Transmission Fluid Type A

REAR AXLE

'61-'62 (3 pts.) '63-'65 (4½ pts.)

(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

80

'61-'62 every 10,000 miles

'64-'65 check level with dipstick in engine compartment

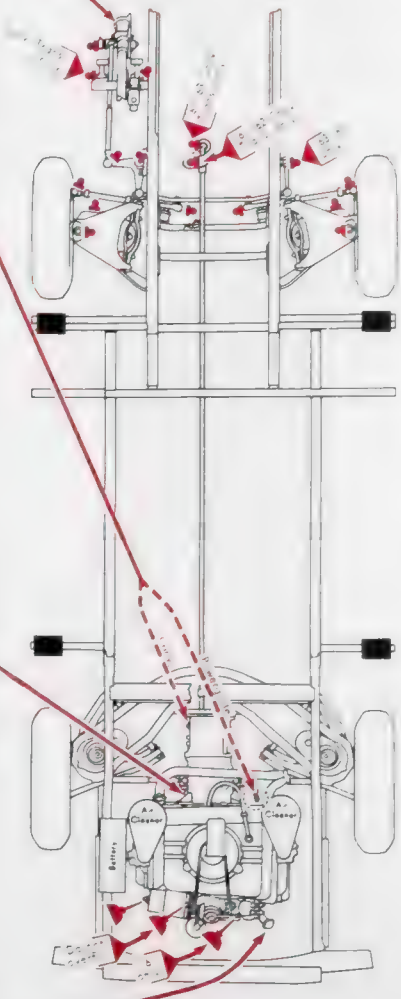
CAUTION: If low, check 3-Speed or 4-Speed transmissions. Refill both units if necessary

CRANKCASE (4 qts.)

Drain and refill: '63-'65—60 days or 6000 miles
'61-'62—Winter—30 days
Summer—60 days
Do not exceed 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20



CONOCO
Oil Chart

SPECIAL SERVICES

AIR CLEANER—POLYURETHANE

AIR CLEANER—DRY TYPE

AIR CLEANER—OIL BATH TYPE

CRANKCASE VENTILATOR

ENGINE OIL COOLER

FUEL FILTER

OIL FILTER

GEARSHIFT LINKAGE and CLUTCH LINKAGE

FRONT WHEEL BEARINGS

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

DISTRIBUTOR CAM LUBRICATOR

UNIVERSAL JOINTS

GAS TANK: 18½ gals.

DODGE TRUCKS SIX AND EIGHT A-100 COMPACT—1964-'66

KEY

- Conoco Super Lube
- Conoco Super Lube Fitting on some models only
- Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

LIFTING PRECAUTIONS
Never lift truck with frame contact hoist

STEERING GEAR (90)
Remove plug and fill

COOLING SYSTEM: 170 engine **11** qts. 225 engine **12** qts. 273 engine **16** qts.

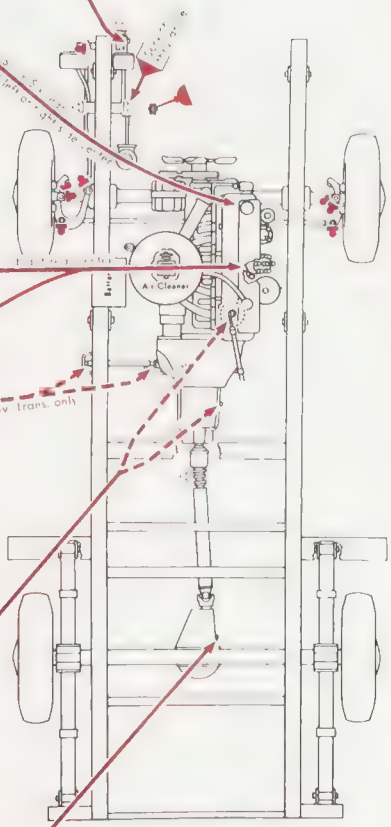
CRANKCASE (4 qts.)

Drain and refill: 3 months or 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade



DISTRIBUTOR OIL CUP
Every 12,000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

TORQUE SHAFT
Every 10,000 miles. Disassemble, clean and repack both ends

TRANSMISSION

3-Speed A-745 (3¼ pts.) Others (6 pts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 32,000 miles, severe service 20,000 miles

LOADFLITE (9 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '65-'66 every 32,000 miles, '64 every 20,000 miles. See General Instructions

REAR AXLE (4 pts.)

(Also includes Full-Traction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90

Drain and refill: Every 32,000 miles, severe service 20,000 miles

CONOCO
CheckChart

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 4000 miles. Fill to level mark with CONOCO Super MOTOR OIL SAE No. 10, Summer; SAE No. 20W, Winter

CARBURETOR CHOKE SHAFT
Clean every 4000 miles. Remove air cleaner to service.

POSITIVE CRANKCASE VENTILATING SYSTEM
Install new valve at least once a year. Also clean all other parts.

FUEL FILTER
Replace filter every 12,000 miles

OIL FILTER
Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

AUTOMATIC TRANSMISSION FILTER
Replace filter: '65-'66 every 32,000 miles; '64 every 20,000 miles.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions

HYDRAULIC BRAKES SPEEDOMETER
See General Instructions

SPRINGS
Every 1000 miles. CONOCO Super MOTOR OIL SAE No. 10W. See General Instruction

UNIVERSAL JOINTS
Every 12,000 miles. See General Instruction

GAS TANK: 21 gals.

TUNE-UP DATA

See Service Instructions for Procedure

CAP is Cleaner Air Package for California vehicles

BATTERY

	AABM Group No.	Amp. Hrs.
1964 170 engine	20H	38
225 engine	24H	48
1965 All	24H	48
1966 All	24	53
	27	70

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)	min.	max.
6-cyl. Auto. Trans.	110	140*
Manual Trans.	130	160**
V-8	120	150*

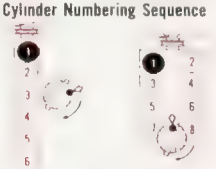
* Maximum variation between cylinders, 20 psi
** Maximum variation between cylinders, 15 psi

SPARK PLUGS
Champion N-14Y*
Gap: .035" Torque: 30-32 ft. lb.
* Gasket not required for 6-cyl.

IGNITION POINTS
Chrysler
Gap: 6-cyl., .017"-.023"; V-8, .014"-.019"
Dwell angle: 6-cyl., 40 -45 , V-8, 28 -32

CONDENSER
Chrysler Capacity: .25-.285 mfd

Cylinder Numbering Sequence

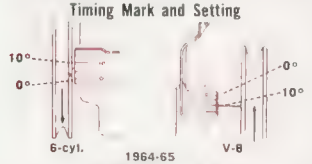


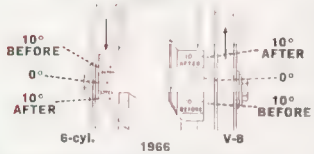
Firing Order: 6-cyl. **1, 5, 3, 6, 2, 4**
V-8 **1, 8, 4, 3, 6, 5, 7, 2**

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed with transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting





Timing Setting (Before Top Dead Center)*
6-cyl., 2½ ; V-8, Man. Trans. 5 , Auto. Trans. 10
* With CAP, 5 After Top Dead Center

FUEL PUMP
Carter model 6-cyl., MS-3674S; V-8, MS-3673S
Pressure: 6-cyl., 3½-5 lb. at idle rpm; V-8, 5-7 lb. at idle rpm
Volume: 1 quart per minute or less at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.	Choke (notches) Auto. Trans.
BALL & BALL			
1964-65 1-bbl. BBS	1	2 rich*	2 rich*
2-bbl. BBD	1	index*	index*
1966 2-bbl. BBD	1	2 rich*	2 rich*
With CAP	2	index	index
HOLLEY			
1964-65 1-bbl.	1	index	index
1966 1-bbl.	2	2 rich	2 rich

* Choke should not be field calibrated. Replace unit if defective

ENGINE IDLE SPEED
Manual Trans.: 6-cyl., 550 rpm except CAP, 170 eng. 700 rpm, 225 eng. 650 rpm; V-8, 500 rpm except CAP, 700 rpm; with headlights on high beam
Auto. Trans.: 6-cyl., 550 rpm except CAP 650 rpm; V-8, 500 rpm except CAP, 650 rpm; in NEUTRAL with headlights on high beam

VALVE CLEARANCES
(engine hot and running)
6-cyl.: Intake .012"; exhaust .024"
V-8: Intake .013"; exhaust .021"

BRAKE ADJUSTMENT

Brakes are self-adjusting. No adjustment normally required

Bleeding sequence: RR, LR, RF, LF

DODGE TRUCKS

SIX AND EIGHT R AND S SERIES—1961-'66
D100 (½ TON), D200 (¾ TON), D300 (1 TON)
(Includes P100, P200, P300 Forward Control Models)

TUNE-UP DATA

See Service Instructions for Procedure

CAP is Cleaner Air Package for California vehicles

BATTERY

	AABM Group No.	Amp. Hrs.
1961-63	24H	50
1964-65	24H	48
1966	24H	53

COMPRESSION PRESSURE

(psi at cranking speed, throttle open)		min.	max.
1961	6-cyl.	130	160
1962-66	6-cyl. Manual Trans.	130	160*
	Auto. Trans.	110	140†
1961	V-8	120	160
1962-66	V-8 Manual Trans.	120	160‡
	Auto. Trans.	110	140†

* Maximum variation between cylinders, 15 psi
† Maximum variation between cylinders, 20 psi
‡ Max. variation: 1962-63, 15 psi; 1964-66, 20 psi

SPARK PLUGS

Champion: 6-cyl., N-6; with CAP, N-14Y. V-8, J-10Y; with CAP, J-14Y
Gap: .035"
Torque: 30 ft. lb.

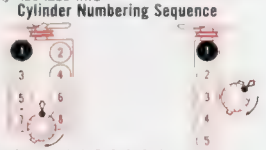
IGNITION POINTS

Prestolite, 1961 V-8; Chrysler, 6-cyl., 1962-66 V-8
Gap: 6-cyl., .017"-.023"; V-8, .014"-.019"
Dwell angle: 6-cyl., 40 -45 °. V-8, 1961-62, 27°-32 °; 1963-66, 28 °-32 °

CONDENSER

Prestolite, 1961 V-8; Chrysler, 6-cyl., 1962-66 V-8
Capacity: .25-.285 mfd

Cylinder Numbering Sequence



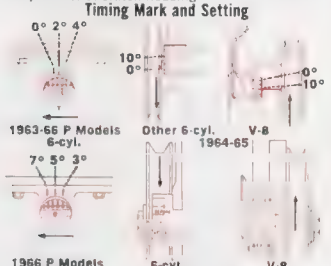
Firing Order: 6-cyl. 1, 5, 3, 6, 2, 4
V-8 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed to 500 rpm, 6-cyl.; 475-500 rpm, V-8; transmission in NEUTRAL
6. Loosen clamp screw, turn distributor until specified timing mark and pointer are aligned*
7. Retighten distributor clamp and recheck alignment of timing mark
8. Reconnect vacuum line, reset idle speed

* 1963-66 P Models 6-cyl.: Remove rubber plug at top center of clutch housing

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6-cyl.: 1966, 170 eng., Man. Trans. 5°, Auto. Trans. 2½°; 225 2½°*; 1961-65, 2½°. V-8, 10°*
* With CAP, 5° After Top Dead Center

FUEL PUMP

Carter model: 6-cyl.: 1961-65 M-2996S, 1966 MS-3674S; V-8: 1961-65 M-2611S, 1966 MS-3673S
Pressure: 6-cyl., 3½-5 lb.; V-8, 1961-65 5-7 lb., 1966 3½-5 lb.; at idle rpm
Volume: 1 quart per minute at idle rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Auto. Trans.
BALL & BALL		
1-bbl. BBS 1961-62	1	index*
1963-65	1	2 rich*
1966	1-2	2 rich*
STROMBERG		
2-bbl. WW3	1¼†	index*

* Choke should not be field calibrated. Replace unit if defective
† With CAP, 1½

ENGINE IDLE SPEED

Manual Trans.: 6-cyl. 550 rpm*; V-8 500 rpm*; with headlights on high beam
Auto. Trans.: 6-cyl. 550 rpm*; V-8 500 rpm*; in NEUTRAL with headlights on high beam
* With CAP, Man. Trans. 650 rpm; Auto. Trans. 600 rpm, with air conditioning turned OFF

VALVE CLEARANCES
(engine hot and running)

6-cyl.: Intake .012"; exhaust .024"
8-cyl.: Intake .012"; exhaust .022"

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:

1. Using a suitable tool inserted into adjustment opening in backing plate, expand shoes until wheel can just be turned by hand
2. Back off adjustment 7-9 notches or until wheel turns freely without drag
3. Repeat procedure at each wheel

1965-66 D100, D200, P200, self-adjusting brakes; adjustment not normally required
Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube
- Conoco Super Lube Fitting on some models only
- SG Conoco Steering Gear Grease
- 90 Conoco Universal Gear Lubricant SAE No. 90
- TA Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

CRANKCASE

383-1 cu. in. engine (4 qts.) Others (5 qts.)

Drain and refill: '65-'66—4000 miles or 3 mos.
'61-'64—2000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F	5W-20

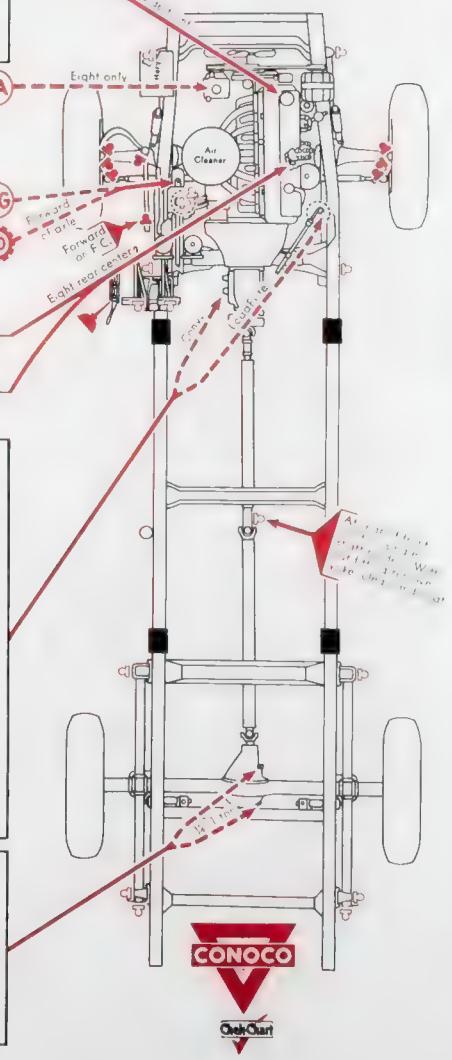
Wash filler cap element in kerosene, dry and recoil with crankcase grade

POWER STEERING RESERVOIR (TA)
Check level. Maintain level to bottom of filler neck or level mark

STEERING GEAR
D100, D200, D300 (SG)
P100, P200, P300 (90)
Remove plug and fill
Reach from under truck

DISTRIBUTOR OIL CUP

DISTRIBUTOR CAM CENTER
Under rotor—4 drops on wick



TRANSMISSION

'63-'66 3-Speed A745 Trans. after No. 1252053 (3¼ pts.)

Conoco Automatic Transmission Fluid Type A

Other 3-Sp. (3¼ pts.) ex. D300, P300 (6 pts.)
Opt. 4-Sp. (5½ pts.) ex. '64-'66 NP-435 (7 pts.)

Conoco Super Motor Oil SAE No.

All temperatures	40

Drain and refill: '61-'64 every 20,000 miles. '65-'66 every 32,000 miles, severe service 20,000 miles

LOADFLITE

'61 (10½ qts.) '62-'66 (9 qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: '61-'64 every 20,000 miles, severe service 10,000 miles; '64-'66 every 32,000 miles, severe service 20,000 miles. See General Instructions

REAR AXLE

½ ton (4 pts.) ¾ ton (5½ pts.)
1 ton (6 pts.)
(Also includes Anti-Spin axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Drain and refill: '61-'64 every 20,000 miles. '65-'66 every 32,000 miles, severe service 20,000 miles

COOLING SYSTEM: Six 13 qts. Eight '61-'63, 20 qts., '64-'66, 16½ qts.

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 10,000 miles

AIR CLEANER—OIL BATH TYPE
Clean base every 2000 miles. Fill to [illegible] mark with [illegible] ALL SEASON [illegible] MOTOR OIL SAE [illegible]

CARBURETOR CHOKE SHAFT
Clean every 5000 miles. Remove air cleaner [illegible] service.

CRANKCASE VENTILATOR VALVE
61-'63 closed system: disassemble and clean every [illegible] mos. 64-66 [illegible]

CRANKCASE BREATHER
Every 5000 miles wash element in [illegible] dry and recoil with CONOCO ALL SEASON Super MOTOR OIL SAE No. 10W-30

FUEL FILTER
Clean fuel filter ceramic element every 2000 miles. Replace paper element every 10,000 [illegible]

OIL FILTER
Replace oil filter element at least every 4000 miles or more often [illegible]

AUTOMATIC TRANSMISSION FILTER
Replace filter at time of transmission drain.

WHEEL BEARINGS FRONT and REAR
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General [illegible]

HYDRAULIC BRAKES SPEEDOMETER
See General Instructions

POWER BRAKE AIR CLEANER
Replace element every 5000 miles

POWER BRAKES
Refer servicing to Authorized Agency

SPRINGS
Every 1000 miles. CONOCO Super MOTOR OIL SAE No. 10W. See General Instructions

UNIVERSAL JOINTS
Every 10,000 miles. See General Instructions.

GAS TANK: F.C. 15¼ gals. others 18 gals.

FORD TRUCKS SIX AND EIGHT F-100, F-250—1965-'66

KEY

- Conoco Super Lube M
- (TA) Conoco Automatic Transmission Fluid Type A
- Service From Under Hood
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

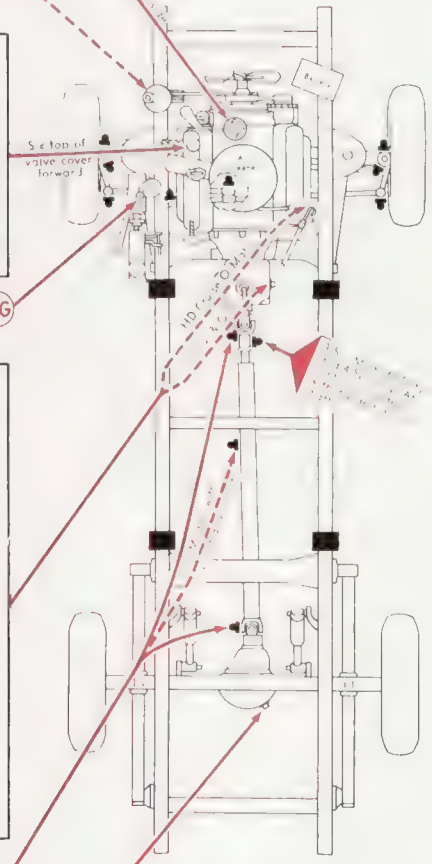
Lubricate front suspension and steering linkage every 6000 miles

DISTRIBUTOR OIL CUP
'65 every 6000 miles; '66, 24,000 miles

DISTRIBUTOR CAM CENTER
Every 12,000 miles. Under rotor—4 drops on wick

'65 Six 300 engine: Eight or 7

POWER STEERING RESERVOIR (TA)
Every 6000 miles. Check level. Maintain level to base of filler neck



CRANKCASE

352 cu. in. engine (5 qts.) Others (4 qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (SG)
Every 6000 miles. Remove plug and fill

3-SPEED TRANSMISSION
(3½ pts.)

TRANS. WITH OVERDRIVE
(4 pts.)

Individual drain plugs, fill thru trans. plug

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

4-SPEED TRANSMISSION
(6½ pts.)

Conoco Super Motor Oil SAE No.

All temperatures	50

Drain and refill: All except '66 3-Speed transmission every 24,000 miles

CAUTION: Fill slowly. Recheck level after short operation

HD CRUISE-O-MATIC

Six (9 qts.) Eight (10 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS
Every 6000 miles

REAR AXLE

F-100, Limited-Slip (4½ pts.)
F-250 (5½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Drain and refill: '66 F-250 every 32,000 miles; '65 F-250, 12,000 miles

CONOCO Chek-Chart

COOLING SYSTEM: Six 13 qts., 14 qts. Eight 21 qts.

SPECIAL SERVICES

AIR CLEANER—OIL BATH TYPE

Clean base every 6000 miles. Fill to level mark with CONOCO Super MOTOR OIL SAE No. 30. Summer; SAE No. 20W, Winter.

AIR CLEANER—THERMACTOR AIR PUMP FILTER

(California trucks only) Replace air pump filter every 12,000 miles.

CRANKCASE VENTILATOR VALVE

Install new valve every 6000 miles, if equipped.

FUEL FILTER

Replace fuel filter element every 12,000 miles.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

WHEEL BEARINGS FRONT and F-250 REAR

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

GAS TANK: 19½ gals. Frame-mounted 17 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22HF	45
	24F	55
	27HF	70

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
240, 300 engines (6-cyl.)	150-200
352 engine (V-8)	160-200

Maximum variation between cylinders, 20 psi

SPARK PLUGS
Autolite: 6-cyl. BTF42; V-8 BF42
Gap: .032"-.036"
Torque: 15-20 ft. lb.

IGNITION POINTS
FoMoCo
Gap: 6-cyl. .024"-.026"; V-8 .016"-.018"
Dwell angle: 6-cyl. 37°-42°; V-8 25°-31°

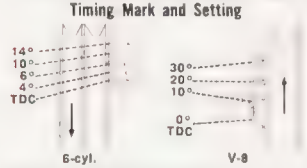
CONDENSER
FoMoCo
Capacity: .21-.25 mfd

Cylinder Numbering Sequence

Firing Order:
6-cyl. 1, 5, 3, 6, 2, 4
V-8 1, 5, 4, 2, 6, 3, 7, 8

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6-cyl.: Manual Trans. 6°*; Auto. Trans. 10°*
V-8: Manual Trans. 4°; Auto. Trans. 6°*
Thermactor: 0°

* For optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. Do not retard initial advance beyond 2° BTDC

FUEL PUMP
AC mechanical
Pressure: 6-cyl. 4-6 lb.; V-8 4½-5½ lb.; at 500 rpm
Volume: 6-cyl. 1 pt. in 30 seconds; V-8 1 pt. in 20 seconds; at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
FORD	
1-bbl.	1-1½
2-bbl.	1-1½

ENGINE IDLE SPEED
Manual Trans.
6-cyl. 500-525 rpm*; Thermactor 625-650 rpm
V-8 575-600 rpm*; Thermactor 610-635 rpm
Auto. Trans.
6-cyl. 500-525 rpm*; Thermactor 550-575 rpm; in DRIVE
V-8 475-500 rpm*; Thermactor 525-550 rpm; in DRIVE
Air Cond.: Same rpm as listed, with unit turned ON and in operation for 20 minutes
* Headlights ON and air conditioner operating

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than halfway with power brakes, engine running, the need for service is indicated
Adjust the brakes as follows:
1. Expand the shoes until a slight drag is felt when turning the brake drum
2. Back off the adjustment 10-12 notches. Drum should turn freely without drag
3. Repeat procedure at each wheel

Bleeding sequence: RR, LR, RF, LF If equipped, bleed power brake cylinder first
F-100: Brakes are self-adjusting. Adjustment is not normally required

FORD TRUCKS SIX AND EIGHT

F-100, P-100—1961-'64; P-100—1965-'66

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1961	29NF	55
	27F	70
1962-63	22NF	40
	29NF	55
1964	29NF	55
	27F	70
1965-66	22HF	45
	24F	55
	27HF	70

COMPRESSION PRESSURE

(at cranking speed with throttle open) psi

144 engine 150-190
170 engine 155-195
Others 130-170
Maximum variation between cylinders, 20 psi

SPARK PLUGS

Autolite: 144, 170 engs. BF82; 223 eng. BTF6; 262 eng. BTF3 light duty, BTF31 heavy duty; 292 eng. BTF6 light duty, BTF31 heavy duty
Gap: BF82 .032"-.036"; others .028"-.032"
Torque: 15-20 ft. lb.

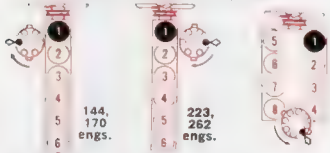
IGNITION POINTS

FoMoCo
Gap: 6-cyl., .024"-.026"; V-8, .014"-.016"
Dwell angle: 6-cyl., 37 -42°; V-8, 26 -31

CONDENSER

FoMoCo Capacity: .21-.25 mfd

Cylinder Numbering Sequence

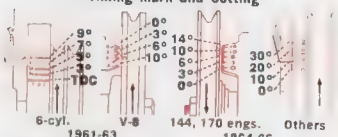


Firing Order:
6-cyl. 1, 5, 3, 6, 2, 4 V-8 1, 5, 4, 8, 6, 3, 7, 2

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug
4. Disconnect distributor vacuum line
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft damper
7. Reconnect vacuum line and reset idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
1961-62: 6-cyl., 6° (2°-11°); V-8, 8° (2°-13°)
1963: 6-cyl. 4° (2°-9°); V-8, 6° (2°-11°)
1964: 6-cyl. 262 2°*, others 4°*; V-8 6°*
1965-66: 6-cyl.: Man. Trans. 4°*; Auto. Trans. 8°*; Thermactor 0°
* For optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. Do not retard initial timing advance beyond 2° BTDC

FUEL PUMP

AC mechanical
Pressure: 1961-64, 3½-5½ lb.; 1965-66, 4-6 lb.; at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)		Idle Mixture (initial turns)
FORD 1-bbl., 2-bbl.	1-1½	HOLLEY 1-bbl.	1-1½

ENGINE IDLE SPEED

Manual Trans.
6-cyl.: 1961-62, 500-550 rpm; 1963, 500-525 rpm; 1964, 144 575-600 rpm, 223, 262 525-550 rpm; 1965-66, 575-600 rpm*, Thermactor 625-650 rpm*
V-8, 500-550 rpm
Auto. Trans. in DRIVE
6-cyl.: 1961-62, 475-525 rpm; 1963, 223 500-525 rpm, 262 475-525 rpm; 1964, 223 525-550 rpm; 1965-66, 500-525 rpm*, Thermactor 550-575 rpm*
V-8, 475-525 rpm
Air Cond.: Same rpm as listed, with unit turned ON and in operation for 20 minutes
* Headlights ON and air conditioner operating

VALVE CLEARANCES

(engine hot and running)
6-cyl. 144, 170; V-8: In. .018"; ex. .018"
6-cyl. 223, 262: In. .019"; ex. .019"

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than halfway with power brakes, engine running, the need for service is indicated
1961-63
Adjust the brakes as follows:
1. Expand the shoes until a slight drag is felt when turning the brake drum
2. Back off the adjustment 10-12 notches. Drum should turn freely without drag
3. Repeat procedure at each wheel

1964-66: Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: RR, LR, RF, LF If equipped, bleed power brake cylinder first

KEY

- Conoco Super Lube M
- Conoco Universal Gear Lubricant SAE No. 90
- Service From Under Hood
- Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

CRANKCASE

144-, 170 cu. in. engines (3½ qts.)
Others (5 qts.)
Drain and refill: '61-'66—4000 miles or 4 mos. except '64 F-100, '66 P-100—6000 miles or 6 mos.
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

DISTRIBUTOR OIL CUP

DISTRIBUTOR CAM CENTER
Under rotor—4 drops on wick

STEERING GEAR
F-100 (SG)
P-100 (90)
Remove plug and fi

3-SPEED TRANSMISSION

'61-'64 (2¾ pts.) '65-'66 (3½ pts.)
Opt. 3-Speed Medium-Duty (3½ pts.)

TRANS. WITH OVERDRIVE (3¼ pts.)

WITH EXTENSION (3½ pts.)

Individual drain plugs, fill thru trans. plug

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

4-SPEED TRANSMISSION

'61-'64 (8 pts.) '65-'66 (6½ pts.)

Conoco Super Motor Oil SAE No.

All temperatures	50

Drain and refill: '61 every 10,000 miles; '62-'66 except '66 Light-Duty, every 24,000 miles

CAUTION: Fill slowly. Recheck level after short operation

FORDOMATIC DRIVE (10 qts.)

HD CRUISE-O-MATIC

'64 Six (9 qts.) '61-'63, '64 Eight (10 qts.)

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

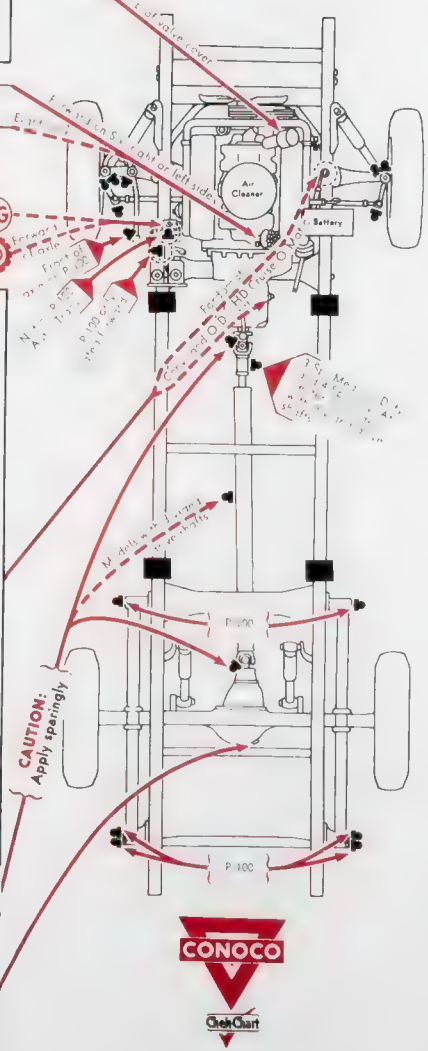
REAR AXLE (4½ pts.)

(Also includes Limited-Slip axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

Drain and refill: '61-'62 Limited-Slip every 10,000 miles



COOLING SYSTEM: Quarts

	1961-'63	1964
Six F-100	18	13½
262 eng.	—	20
P-100	18½	18½
144 eng.	9	9
Eight	21	16½
	1965-'66	
170 eng.	9	

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 12 000 mile

AIR CLEANER—OIL BATH TYPE

Clean base every 4000 miles. Fill to level mark with CONOCO Super MOTOR OIL SAE No 30, Summer; SAE No. 20W Winter

CRANKCASE VENTILATOR VALVE

[61-64] When equipped with closed crankcase ventilating system, d[illegible] every 4000 miles. [65-66] [illegible] every 4000 miles. Also cl[illegible]

FUEL FILTER

Replace fuel filter element: every 8000 miles ['61-'62]; 4000 miles ['63]; 144, 262 cu. in engines 36 000 miles ['64 all '65-'66] other ['64] 6000 miles. Clean glass bowl and magnetic filter if equipped

OIL FILTER

Replace oil filter element at least every 4000 miles or more often if oil becomes dirty

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

SPRINGS

Every 1000 miles, CONOCO Super MOTOR OIL SAE No. 10W. See General Instructions.

SHOCK ABSORBERS

Direct acting type. Nonrefillable, servicing requires replacement.

REAR WHEEL BEARINGS

Sealed type bearings.

GAS TANK: 19½ gals. Frame mounted 17 gals.

FORD TRUCKS ECONOLINE—1964-'66

(Includes Falcon Station Bus, Club Wagon)

KEY

- Conoco Super Lube M
- (SG) Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months

CRANKCASE

240 cu. in. eng. (4 qts.) Others (3½ qts.)

Drain and refill: 6000 miles or 6 months
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

STEERING GEAR (SG)

Every 6000 miles or 6 months. Remove plug and fill

Reach thru opening in toe-board

DISTRIBUTOR OIL CUP

'64-'65 every 12,000 miles or 12 months, '66 24,000 miles or 2 years

DISTRIBUTOR CAM CENTER

Every 24,000 miles or 2 years. Under rotor—4 drops on wick

3-SPEED TRANS. (3½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 80

4-SPEED TRANS. (4½ pts.)

Conoco Super Motor Oil SAE No.

All temperatures 50

Drain and refill: '64-'65 every 24,000 miles or 2 years

AUTOMATIC DUAL RANGE C4

'65-'66 240 cu. in. engine (10½ qts.)
Others (7½ qts.)
Dry capacities. Fill to full mark

Conoco Automatic Transmission Fluid Type A

See General Instructions

UNIVERSAL JOINTS

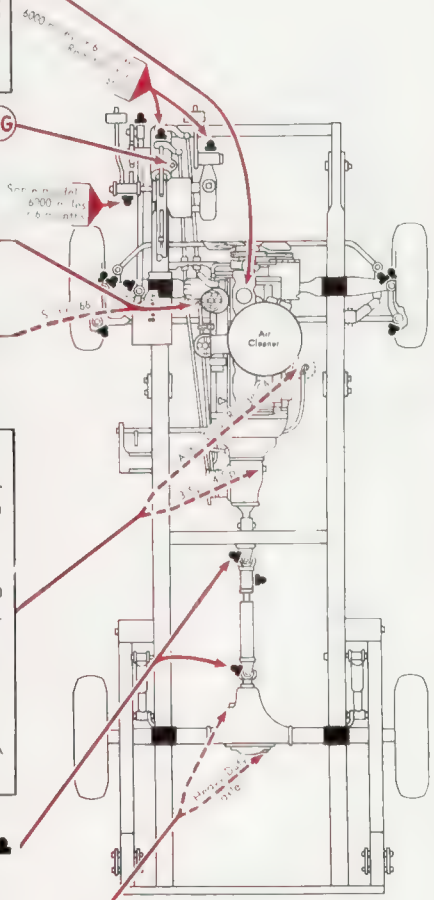
Every 6000 miles or 6 months

REAR AXLE

Limited-Slip (4½ pts.)
Heavy-Duty (5 pts.)
Others (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures 90



CONOCO Chek-Chart

COOLING SYSTEM: 240 cu. in. engine 11½ qts. Others 8½ qts.

SPECIAL SERVICES

AIR CLEANER—OIL BATH TYPE

Clean base every 6000 miles. Fill to level mark with CONOCO ALL-SEASON Super MOTOR OIL SAE No. 10W 30.

AIR CLEANER—THERMACTOR AIR PUMP FILTER

(California trucks only) Replace air pump filter every 12,000 miles

CRANKCASE VENTILATOR VALVE

When equipped, all valves except jiggle-pin type, disassemble and clean valve and all parts every 6000 miles. Jiggle-pin type, install new valve every 6000 miles and clean all other parts.

FUEL FILTER

Replace fuel filter every 12,000 miles. '66 with Thermactor system replace as required.

OIL FILTER

Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions.

SPRINGS

Equipped with friction inserts. Do not lubricate.

GAS TANK: 14 gals.

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1964	22NF	40
1965-66	22HF	45
	24F	55

COMPRESSION PRESSURE
(psi at cranking speed, throttle open) min. max.

1964: 144, 170 engines.....150-190
1965-66: 170, 200 engines.....155-195
240 engine 150-200
Maximum variation between cylinders, 20 psi

SPARK PLUGS
Autolite: BF82 except 240 engine, BTF42
Gap: .032"-.036"
Torque: 15-20 ft. lb.
Do not use gasket with tapered seat plugs

IGNITION POINTS
FoMoCo
Gap: New points .025" or 40° dwell
Used points set by dwell only to 40
Dwell angle: 37°-42

CONDENSER
FoMoCo
Capacity: .21-.25 mfd

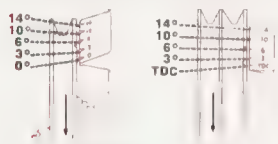
Cylinder Numbering Sequence

144, 170 200 engs. 240 eng.

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



144, 170, 200 engs. 240 eng.

Timing Setting (Before Top Dead Center):
1964: 144, 170 engs., Man. Trans. 4°*; Auto. Trans. 8°*
1965-66:
170 eng., Man. Trans. 4°; Auto. Trans. 8°*
200 eng., Man. Trans. 6°*; Auto. Trans. 10°*
240 eng., Man. Trans. 4°*; Auto. Trans. 10°*
California trucks with Thermactor, TDC
* For high altitudes or optimum performance and economy, timing may be advanced to a point just short of audible detonation under road test load but not to exceed 5° over normal setting. To eliminate detonation, never retard initial advance beyond 2° BTDC

FUEL PUMP
AC mechanical
Pressure: 1964, 3½-5½ lb.; 1965-66, 4-6 lb.; at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
FORD	
1-bbl.	1-1½

ENGINE IDLE SPEED
Manual Trans.: 575-600 rpm*
Auto. Trans.: 1964, 550-575 rpm; 1965-66, 500-525 rpm*; in DRIVE
Air Cond.: As listed above but with unit turned ON and in operation for 20 minutes
* 1965-66, with headlights ON and carburetor air cleaner removed

VALVE CLEARANCES
(engine hot and running)
144, 170 engs.: Intake .018"; exhaust .018"
200, 240 engs.: Hydraulic lifters

BRAKE ADJUSTMENT

Self-adjusting brakes are used. Adjustment is not normally required

Bleeding sequence: RR, LR, RF, LF

FORD TRUCKS — ECONOLINE—1961-'63

(Includes Falcon Station Bus, Club Wagon)

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	22NF	40
	24F	55

COMPRESSION PRESSURE

(psi at cranking speed, throttle open) min. max.
All 150 190
Maximum variation between cylinders, 10 psi

SPARK PLUGS

Autolite BF82
Gap: .032"-.036"
Torque: 15-20 ft. lb
Do not use gasket with tapered seat plugs

IGNITION POINTS

FoMoCo
Gap: .024"-.026"
Dwell angle: 35°-38°

CONDENSER

FoMoCo
Capacity: .21-.25 mfd

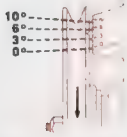
Cylinder Numbering Sequence

Firing Order: 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
4° (Allowable range, 2°-9°)

FUEL PUMP

AC mechanical
Pressure: 3½-5½ lb. at 500 rpm
Volume: 1 pint in 30 seconds at 500 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
FORD	
1-bbl.	1-1½
HOLLEY	
1-bbl.	1-1½

ENGINE IDLE SPEED

525-575 rpm

VALVE CLEARANCES

(engine hot and running)
Intake .018"; exhaust .018"

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than halfway, the need for service is indicated

Adjust the brakes as follows:

1. Disconnect parking brake cable at equalizer
2. Expand shoes until a moderate drag is felt when turning wheel
3. Back off adjustment 10 notches to permit wheel to rotate freely
4. Repeat procedure at each wheel
5. Reconnect parking brake and adjust

Bleeding sequence: RR, LR, LF, RF

KEY

- Conoco Super Lube M
- SG Conoco Steering Gear Grease
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

CRANKCASE (3½ qts.)

Drain and refill: '62-'63—6000 miles or 6 mos
'61—4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

COOLING SYSTEM: '61, 8¾ qts., '62 '63, 9 qts.

STEERING GEAR (SG)
Remove plug and fill
Reach thru opening in toe-board

Reached thru front grille

Reached under truck

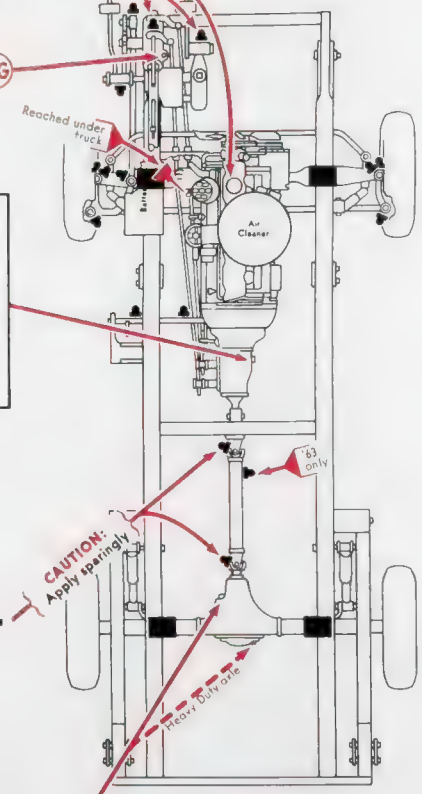
TRANSMISSION

'61-'62 (2½ pts.) '63 (3 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

Drain and refill: Every 24,000 miles



UNIVERSAL JOINTS

REAR AXLE

Heavy-Duty (5 pts.) Others (2½ pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	90

CONOCO Check Chart

SPECIAL SERVICES

AIR CLEANER—DRY TYPE

Replace element every 10,000 [illegible]

AIR CLEANER—OIL BATH TYPE

Clean base every 2000 miles. F[illegible] mark with 1 pt. CON[illegible] OIL SAE No. 10 S[illegible] SAE No. 20W Winter

CRANKCASE VENTILATOR VALVE

When equipped with closed crankcase ventilating system, disassemble and clean every 5000 miles.

FUEL FILTER

Replace fuel filter every 8000 miles

OIL FILTER

Replace oil filter element at least every 4000 miles ('61), 6000 miles ('62-'63) or more often if oil becomes dirty

FRONT WHEEL BEARINGS

Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE

See General Instructions

SPRINGS

Equipped with friction inserts. Do not lubricate

SHOCK ABSORBERS

Direct acting type. Nonrefillable, servicing requires replacement

REAR WHEEL BEARINGS

Sealed type bearings

GAS TANK: 14 gals.

GENERAL MOTORS TRUCKS HANDI-VAN MODEL G-1000—1964-'66

KEY

- Conoco Super Lube
- Conoco Super Lube Fitting on some models only
- Service From Under Hood
- Positions For Frame Engaging Lift Adapters

Lubricate front suspension and steering linkage every 6000 miles or 6 months

COOLING SYSTEM: 4 Cyl. 9½ qts. 6 Cyl. 12 qts.

CRANKCASE

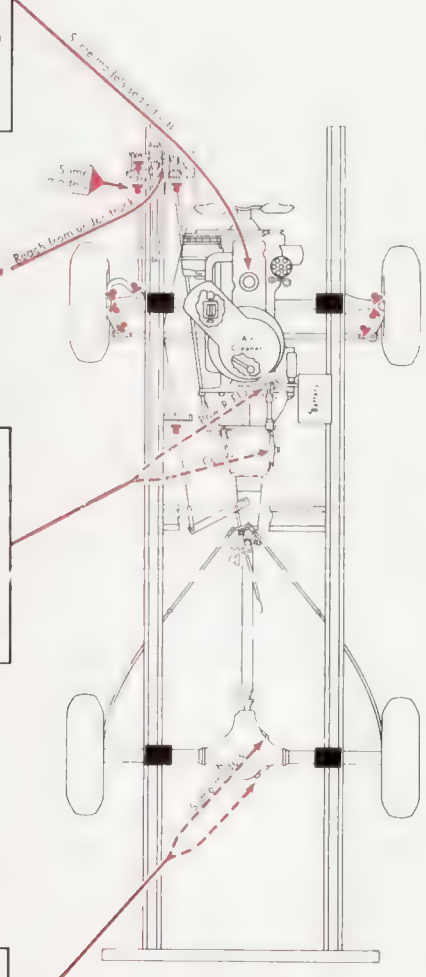
4 Cyl. (3¾ qts.) 6 Cyl. (4 qts.)

Drain and refill: 60 days or 6000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade



STEERING GEAR
Every 36,000 miles. Remove plug and fill

TRANSMISSION (2 pts.)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

POW-R-FLO (1½ qts.)

Conoco Automatic Transmission Fluid Type A

Drain and refill: Every 12,000 miles, severe service 6000 miles. See General Instructions

REAR AXLE

Heavy-Duty axle (4½ pts.) Others (3½ pts.)
(Also includes Positraction axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

SPECIAL SERVICES

AIR CLEANER—DRY TYPE
Replace element every 12,000 miles.

AIR CLEANER—OIL BATH TYPE
Clean base every 6000 miles. Fill to level mark with CONOCO Super MOTOR OIL SAE No. 50, Summer; SAE No. 20W, Winter.

CRANKCASE VENTILATOR
['64-'65) Valve type, install new valve every 6000 miles; orifice type, clean hose and fittings as required. ('66) Install new valve every 6000 miles. Also clean hose and fittings.

FUEL FILTER
Replace fuel filter element in carburetor inlet only if flooding occurs.

OIL FILTER
Replace oil filter element at least every 6000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 12,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency.

GAS TANK: 16 gals.

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California vehicles

BATTERY

	AABM Group No.	Amp. Hrs.
All	22F	44
	24T	70

COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
All 130
Maximum variation between cylinders, 20 psi

SPARK PLUGS
AC 46N; for continuous heavy-duty operation, 44N
Gap: .035"
Torque: 25 ft. lb.

IGNITION POINTS
Delco
Gap: .016" used; .019" new
Dwell angle: 31° -34°

CONDENSER
Delco
Capacity: .18-.23 mfd

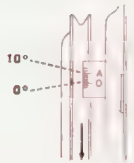
Cylinder Numbering Sequence

Firing Order:
4-cyl. 1, 3, 4, 2
6-cyl. 1, 5, 3, 6, 2, 4

TIMING PROCEDURE

1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed to 500 rpm
6. Observe timing at crankshaft pulley and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
4-cyl. 4° (Range, 4°-8°)
6-cyl.: 194 eng. 8° (Range, 6°-10°); 230 eng. 4°; with A.I.R. and Manual Trans., 3°
(Each line equals 2°)

FUEL PUMP
AC mechanical; 1966, model KA
Pressure: 3½-4½ lb. at idle to 1000 rpm
Volume: 1 pint in 30-45 seconds at idle rpm

CARBURETOR ADJUSTMENT

CARTER	Idle Mixture (initial turns)
1-bbl. YF	1½

ENGINE IDLE SPEED
Manual Trans. 450-500 rpm; with A.I.R., 700 rpm
Auto. Trans. 450-500 rpm; with A.I.R., 600 rpm; in DRIVE

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

Brakes are self-adjusting. Adjustment is not normally required
Bleeding sequence: LR, RR, RF, LF

GENERAL MOTORS TRUCKS

SERIES 1000 EXCEPT Jr. VAN; 1500—1960-'66
SERIES 2500; P-, PB1000—1963-'66
SERIES I-1000, I-1500, I-2500—1964-'66

TUNE-UP DATA

See Service Instructions for Procedure

A.I.R. is Air Injection Reactor System for California vehicles

BATTERY

	AABM Group No.	Amp. Hrs.
All	24	53, 61
	24T	70

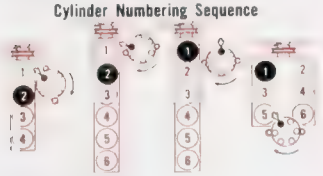
COMPRESSION PRESSURE
(at cranking speed with throttle open) psi
V-6 engine 125
In-line 6 and 4-cyl. engines 130

SPARK PLUGS
AC: V-6, 1960-61 C44, 1962 C44S, 1963 C44S (⅜" reach) or C44NS (¼" reach) depending on head design; 1964-66 C44NS ex. 1966 351E eng. C42N In-line 6 and 4-cyl., 46N ex. 1966 194 eng. 44N, 292 eng. C44N
Gap: V-6, .033"-.038" ex. 1966 305E eng. .035", 351E eng. .030"; in-line 6 and 4-cyl., .035"
Torque: 23-27 ft. lb.

IGNITION POINTS
Delco Gap: .016" used; .019" new
Dwell angle: 31 -34 ex. 305E eng., 31 -35

CONDENSER
Delco Capacity: .18-.23 mfd

Cylinder Numbering Sequence



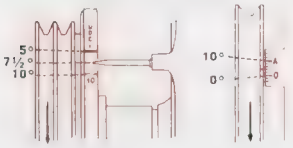
P-, PB1000 Others

Firing Order:
V-6 1, 6, 5, 4, 3, 2
In-line 6 1, 5, 3, 6, 2, 4
4-cyl. 1, 3, 4, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Disconnect distributor vacuum line and tape manifold opening
3. Connect timing light to No. 1 spark plug or distributor cap tower (1963-66 P-, PB1000, No. 2 spark plug or distributor cap tower)
4. Set idle speed to lowest rpm at which the engine will run smoothly
5. Observe timing at crankshaft damper or pulley* and turn distributor to obtain recommended setting
6. Reconnect vacuum line and reset to proper idle

* P- PB1000: Use oil pan timing tab under vehicle

Timing Mark and Setting



V-6 4-cyl. and In-line 6

Timing Setting (Before Top Dead Center):
V-6: 1960-61, 5°; 1962-66, 7½° ex. 351E eng. 10°; with A.I.R. and Manual Trans., 2½° ATDC
In-line 6 and 4-cyl.: 4

FUEL PUMP
AC: V-6, 1960-63, model HK, 1964-65, model HQ; 1966, model KA
In-line 6 and 4-cyl., model EM
Pressure: V-6, 5-6 lb. at 3600 rpm
In-line 6 and 4-cyl., 3½-4½ lb. at 500-1000 rpm
Volume: Not required

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
CARTER 1-bbl.	1½
HOLLEY 1-bbl. 1904	1
ROCHESTER 1-bbl. B	1½-2½
STROMBERG 2-bbl. WW2	1

ENGINE IDLE SPEED
Manual Trans.: 500-550 rpm
Auto. Trans.: In-line 6 and 4-cyl., 450-500 rpm; V-6, 450 rpm; in NEUTRAL

VALVE CLEARANCES
(engine hot and running)
V-6: Intake .012"; exhaust .018"
In-line 6 and 4-cyl.: Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2" with standard brakes or more than 1" with power brakes, engine running, the need for service is indicated
Adjust brakes as follows:
1. Disconnect parking brake cable from idler lever
2. Using a suitable tool inserted into adjustment opening in backing plate, turn star wheel adjuster until a light drag is felt when drum is revolved
3. Back off adjuster 7 notches
4. Repeat procedure at each wheel
5. Reconnect parking brake cable and adjust

1964-66 1000, 1500, I-1000, I-1500; 1965-66 2500, I-2500, P-, PB1000, self-adjusting brakes; adjustment not normally required
Bleeding sequence: LR, LF, RR, RF

KEY

- Conoco Super Lube
- Conoco Super Lube Fitting on some models only
- SG Conoco Steering Gear Grease
- 90 Conoco Universal Gear Lubricant SAE No. 90
- 140 Conoco Universal Gear Lubricant SAE No. 140
- TA Conoco Automatic Transmission Fluid Type A
- Conoco Super Motor Oil SAE No. 20-20W
- Service From Under Hood

Unless otherwise recommended, lubricate all points: '60-'63 every 1000 miles; '64-'66 every 6000 miles

STEERING GEAR (SG, 90)
'60 '64 Remove plug and fill
'65 '66
Remove forward and outboard steering gear cover attaching screws. Inject lubricant into forward screw hole until lubricant comes out of other hole. Replace screws

POWER STEERING RESERVOIR (TA)
Check level. Maintain to level mark

CRANKCASE

V-6 305 engine, 351E engine (5 qts.)
In-line 6 (4 qts.) except 292 engine (5 qts.)
4 Cyl. (3½ qts.)
Drain and refill: 3000 miles or 60 days
See Page 1 for exceptions
Conoco All-Season Super Motor Oil SAE No.
Above +32°F. 10W-30
Above 0°F. 10W-30
Below 0°F. 5W-20
Wash filler cap elements in kerosene, dry and recoil with crankcase grade

DISTRIBUTOR OIL CUP (Same as Line)
DISTRIBUTOR CAM CENTER ('64-'66 292, 305E, 351E engs.)
Under rotor—4 drops on wick
SPEEDOMETER ADAPTER
Fitting or grease cup

TRANSMISSION

'63-'65 3-Speed H.D. New Process 745G (3¾ pts.)
Conoco Automatic Transmission Fluid Type A
Other 3-Speed (2 pts.)
Opt. 3-Speed H.D. (2¾ pts.)
Opt. 4-Speed (6 pts.)
Opt 4-Speed H.D. NP-435G (6¾ pts.)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90
Drain and refill: '60-'63 every 10,000 miles; '64-'66 every 12,000 miles

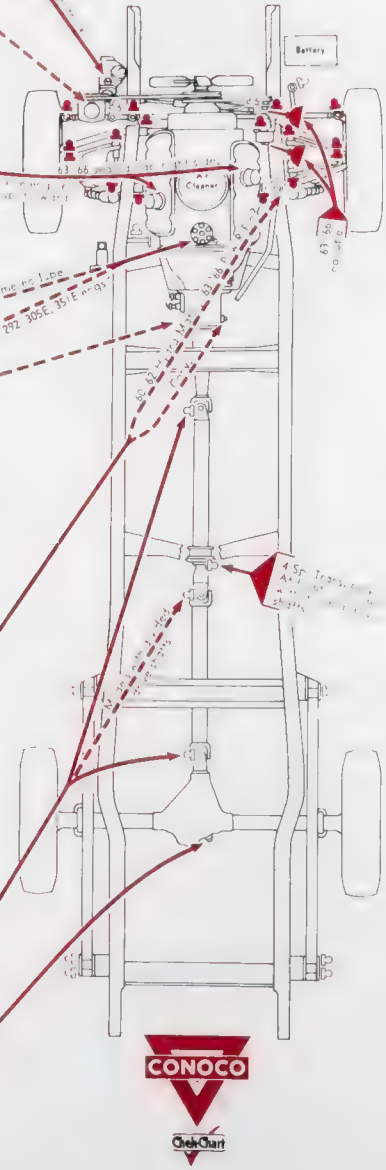
'60-'62 HYDRA-MATIC DRIVE
1000 (9 qts.) 1500 (10 qts.)
Conoco Super Motor Oil (crankcase grade)
(Continued sub-zero temp.—Conoco Automatic Transmission Fluid Type A)

'63-'66 POW-R-FLO (2 qts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: '60-'62 every 15,000 miles; '63-'66 every 12,000 miles. All severe service 6000 miles. See General Instructions

UNIVERSAL JOINTS (140)

REAR AXLE

1000 (3 pts.) 1500 (5½ pts.) 2500 (6½ pts.)
(Also includes Powr-Lok or Positraction axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 90
Drain and refill: '60-'63 every 10,000 miles; '64-'66 every 24,000 miles



COOLING SYSTEM: 1000 Series 32 qts., 1500, 2500 Series 34 qts, I-1000, I-1500 I-2500 Series 11 qts. P-, PB1000 14 qts. 4 Cyl. 8¼ qts.

SPECIAL SERVICES

AIR CLEANER
Wash element in kerosene [illegible] dry and wet with CONOCO [illegible] MOTOR OIL SAE No. 50

AIR CLEANER—DRY TYPE
Check element every 3000 miles. Replace if clogged.

AIR CLEANER—OIL BATH TYPE
Clean base every 2000 miles [illegible] level mark with CONOCO Super MOTOR OIL (crankcase grade).

CRANKCASE VENTILATOR VALVE
('60-'65) When equipped [illegible]

CRANKCASE BREATHER
(V-6 [illegible] type ventilation only) Check [illegible] Replace when required.

FUEL FILTER
('60-'62 [illegible] '63) Replace fuel filter element on frame side rail every 12,000 miles. (Other '63, '64-'66) Replace [illegible] in carburetor inlet only if flooding occurs.

OIL FILTER
Replace oil filter element at least every 3000 miles or more often if oil becomes dirty.

WHEEL BEARINGS
FRONT and 1500, 2500 SERIES REAR
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions.

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

DISTRIBUTOR CAM LUBRICATOR
Refer servicing to Authorized Agency.

BRAKE VACUUM CYLINDER AIR CLEANER
See General Instructions.

GAS TANK: 16¾-20 gals.

INTERNATIONAL TRUCKS SCOUT 80, 800—1961-'66

KEY

- Conoco Super Lube
- Conoco Universal Gear Lubricant SAE No. 90
- Conoco Super Lube Fitting on some models only
- Conoco Super Motor Oil SAE No. 20-20W

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

CRANKCASE (4 qts.)

Drain and refill: 3000 to 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

WINCH GEAR CASE

Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

Keep filled to plug level

FRONT AXLE (2¼ pts.)

(Also includes Powr-Lok axle)

Conoco Universal Gear Lubricant SAE No.

All temperatures	80

Drain and refill: Twice yearly or every 10,000 miles

STEERING GEAR (90)

'61-'63, remove vent assembly to fill
Keep filled to bottom of threaded hole
'64-'66, remove plug and fill

DISTRIBUTOR OIL CUP

DISTRIBUTOR CAM CENTER

Under rotor—4 drops on wick

FRONT AXLE DRIVE JOINTS

(4x4 only) Remove plug and fill

TRANSMISSION

3-Speed (2¾ pts.) 4-Speed (7 pts.) 4x4, if equipped with Power Take-Off, add 1½ pts.

TRANSFER CASE (3½ pts.)

If equipped with Power Take-Off, add 1½ pts.

Individual drain and fill plugs

Conoco Super Motor Oil SAE No.

All temperatures	40

Drain and refill: Twice yearly or every 10,000 miles

REAR AXLE

RA-9, RA-23 (3 pts.) Others (2¼ pts.)

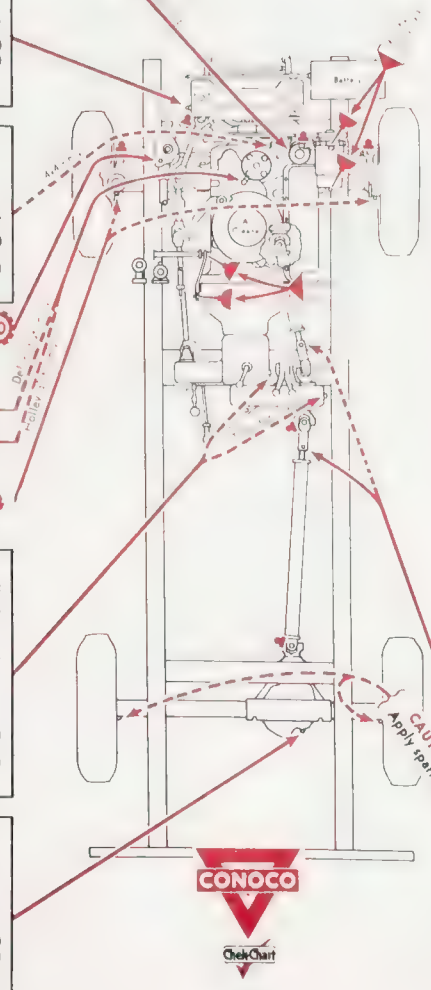
(Also includes Powr-Lok axle)

Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

Drain and refill: Twice yearly or every 10,000 miles

Winch universal joints (4 plugs or fittings). Every 3000 miles lubricate with CONOCO UNIVERSAL GEAR LUBRICANT SAE No. 140



COOLING SYSTEM: 12 qts.

SPECIAL SERVICES

AIR CLEANER—OIL BATH TYPE
Clean base every 2000 miles. Fill to level mark with 1 pt. CONOCO Super MOTOR OIL (crankcase grade)

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system, disassemble and clean every 5000 miles

FUEL FILTER
Inspect fuel filter bowl and element, clean as required. Replace element when clogged

OIL FILTER
Replace oil filter element at least every 3000 miles or more often if oil becomes dirty.

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

CLUTCH RELEASE FORK
Every 10,000 miles remove bottom cover plate. Coat fork tips and contact pads sparingly with CONOCO SUPER LUBE

SPRINGS
Equipped with friction inserts [illegible] cate.

UNIVERSAL JOINT SPLINE

Remove and replace plug
Some equipped with fittings

REAR WHEEL BEARINGS

(4x4 with RA-9 or RA 23 axle) Every 10,000 miles. Remove and replace plug

GAS TANK: 11 gals. Dual tanks 11 gals. each tank

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24H	40, 60

COMPRESSION PRESSURE
(at cranking speed with throttle open)
Lowest cylinder pressure must be within 90% of highest cylinder

SPARK PLUGS
AC C43; Champion J-6 or UJ-6
Gap: .025"-.030"
Torque: 28-30 ft. lb.

IGNITION POINTS
Delco, Holley
Gap: Used points .014"; new points .017"
Dwell angle: 74°-76

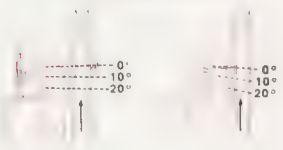
CONDENSER
Delco, Holley
Capacity: .18-.23 mfd

Cylinder Numbering Sequence

Firing Order: 1, 3, 4, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line
5. Set idle speed with transmission in NEUTRAL
6. Observe timing mark at crankshaft damper
7. Turn distributor to obtain alignment of timing mark and pointer
8. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center): 5

FUEL PUMP
AC or Carter
Pressure: 4-5½ lb. at 1000 rpm
Volume: 52 ounces per minute at speeds up to 4000 rpm

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)
HOLLEY 1-bbl. 1904	¾-1¼

ENGINE IDLE SPEED
450-500 rpm

VALVE CLEARANCES
Hydraulic lifters

BRAKE ADJUSTMENT

With the brakes cold, if the brake pedal can be depressed more than 2", the need for service is indicated

Two adjustment cams are provided on each backing plate

Adjust the brakes as follows:
1. Turn adjustment cam until drum cannot be turned by hand
2. Back off adjustment cam until drum just turns freely without drag
3. Repeat steps 1 and 2 for other adjustment cam
4. Repeat procedure at each wheel

Bleeding sequence: RR, LR, RF, LF

INTERNATIONAL TRUCKS C SERIES 100, 1000—1961-'65 D SERIES 1000—1965-'66

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
All	24H	50, 60, 70

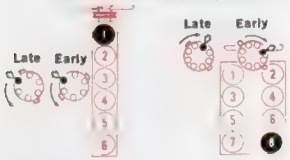
COMPRESSION PRESSURE
(at cranking speed with throttle open)
Lowest cylinder pressure must be within 90% of highest cylinder

SPARK PLUGS
6-cyl.: AC C45; Champion J-8 or UJ-8. 8-cyl.: AC C43; Champion J-6 or UJ-6
Gap: 6-cyl., .028"-.033"; 8-cyl., .025"-.030"
Torque: 28-30 ft. lb.

IGNITION POINTS
Delco, Holley
Gap: 6-cyl. used points .016"; new points .019"
8-cyl. used points .014"; new points .017"
Dwell angle: 6-cyl., 28°-35°; 8-cyl., 26°-29°

CONDENSER
Delco, Holley
Capacity: .18-.23 mfd

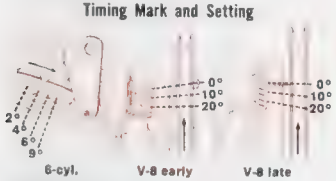
Cylinder Numbering Sequence



Firing Order:
6-cyl. 1, 5, 3, 6, 2, 4
8-cyl. 1, 8, 4, 3, 6, 5, 7, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. 6-cyl: Connect timing light to No. 1 spark plug or distributor cap tower
   8-cyl.: Connect timing light to No. 8 spark plug or distributor cap tower
4. With transmission in NEUTRAL:
   6-cyl.: Set to idle speed
   8-cyl.: Set to 350 rpm
5. Observe timing mark:
   6-cyl : Thru opening in flywheel housing
   8-cyl.: At crankshaft damper
6. Turn distributor to obtain alignment of timing mark and pointer
7. Reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
6-cyl.: 220, 240, 241 engines, 4°
8-cyl.: 266 engine, 4°; 304 engine, 0°

FUEL PUMP
AC or Carter
Pressure: 6-cyl., 3-4½ lb.; 8-cyl., 4-5½ lb.; at 500-2000 rpm
Volume: 6-cyl., 33½ ounces per minute at speeds up to 3500 rpm; 8-cyl., 57½ ounces per minute at speeds up to 4000 rpm

CARBURETOR ADJUSTMENT

HOLLEY	Idle Mixture (initial turns)
6-cyl.	
1-bbl. 1904*	¾-1¼
1-bbl. 1904**	1¼-1¾
8-cyl.	
2-bbl. 2300	1

* 220 engine
** 240, 241 engines

ENGINE IDLE SPEED
Manual Trans. 350-400* rpm
Auto. Trans. 350-400* rpm in DRIVE
* 8-cyl., 450-500 rpm

VALVE CLEARANCES
(engine hot and running)
6-cyl.: Intake .024"-.026"; exhaust .024"-.026"
8-cyl.: Hydraulic lifters

BRAKE ADJUSTMENT

1965-66 D Series 1000: Brakes are self-adjusting. No adjustment normally required
Others: With the brakes cold, if the brake pedal can be depressed more than 2"-3" the need for service is indicated

Adjust the brakes as follows:
1. Using suitable tool inserted into adjusting opening in backing plate, expand shoes until drum can just be turned by hand
2. Back off adjustment screw until drum turns freely without drag
3. Repeat procedure at each wheel

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube
- Conoco Super Lube Fitting on some models only
- (90) Conoco Universal Gear Lubricant SAE No. 90
- (140) Conoco Universal Gear Lubricant SAE No. 140
- Conoco Super Motor Oil SAE No. 20-20W
- Conoco Super Motor Oil SAE No. 10W
- Service From Under Hood

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES

POWER STEERING RESERVOIR
Remove cover. Maintain level to "F" mark on dipstick or "OIL LEVEL" mark on filler neck

CAUTION

STEERING GEAR (90)
Remove plug and fill

CRANKCASE
Six (6 qts.) Eight (5 qts.)
Drain and refill: 3000 to 4000 miles
See Page 1 for exceptions

Conoco All-Season Super Motor Oil SAE No.

Above +32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

Wash filler cap element in kerosene, dry and recoil with crankcase grade

TACHOMETER DRIVE GEARS
Every 3000 miles. Apply lubricant until it appears at vent hole in distributor housing. With Holley distributor, remove cover plate. Coat gears lightly with Conoco Super Lube

DISTRIBUTOR RESERVOIR
Every 10,000 miles. Remove plug and fill

DISTRIBUTOR CAM CENTER
Under rotor 4 drops on wick

DISTRIBUTOR OIL CUP

TRANSMISSION
3-Speed Synchro-Shift (2½ pts.)
Opt. 4-Speed (7 pts.)
If equipped with Power Take Off add 1½ pts.

TRANS. WITH OVERDRIVE (3½ pts.)
Individual drain and fill plugs. Fill overdrive first, then transmission

Conoco Super Motor Oil SAE No.

All temperatures	40

Drain and refill: Twice yearly or every 10,000 miles

AUTOMATIC TRANS. (10 qts.)
Conoco Automatic Transmission Fluid Type A
Drain and refill: Every 15,000 miles. See General Instructions

UNIVERSAL JOINT SPLINE
Remove and replace plug
Some equipped with fittings

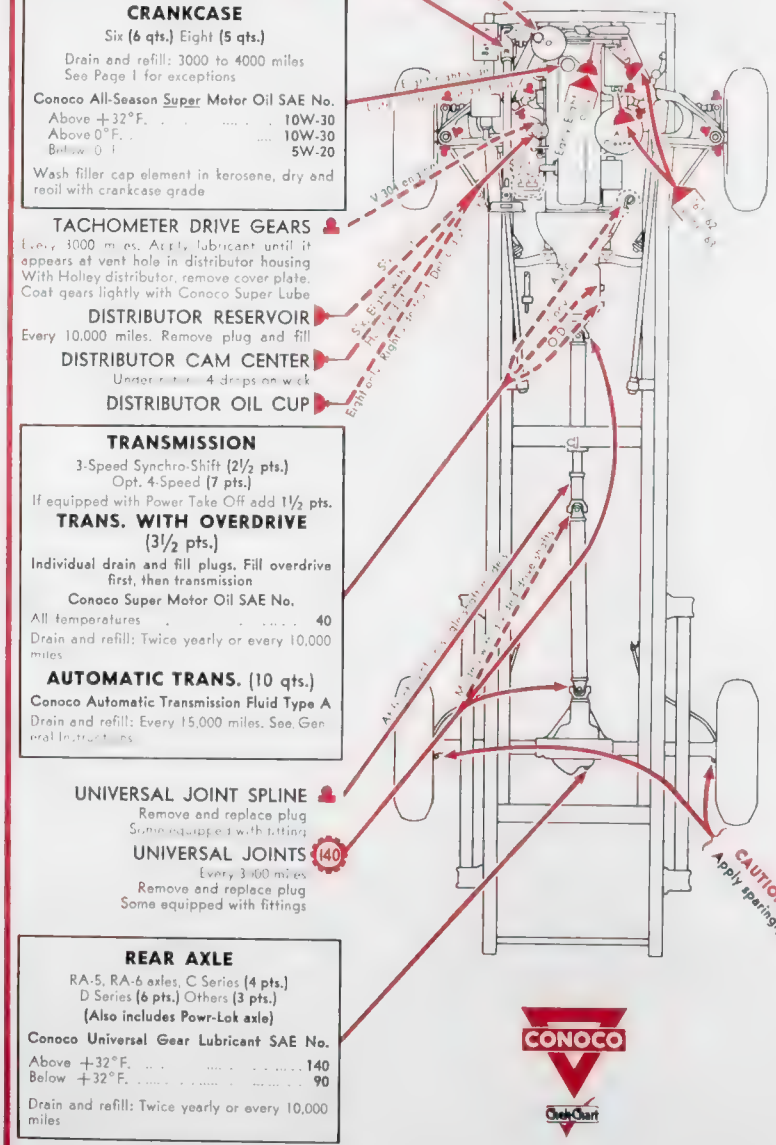
UNIVERSAL JOINTS (140)
Every 3000 miles
Remove and replace plug
Some equipped with fittings

REAR AXLE
RA-5, RA-6 axles, C Series (4 pts.)
D Series (6 pts.) Others (3 pts.)
(Also includes Powr-Lok axle)

Conoco Universal Gear Lubricant SAE No.

Above +32°F.	140
Below +32°F.	90

Drain and refill: Twice yearly or every 10,000 miles



COOLING SYSTEM: [illegible] 16 qts., Eight V-266 engine 19 qts., V-304 engine 20 qts.

SPECIAL SERVICES

AIR CLEANER—OIL BATH TYPE
Clean base every 2000 miles. Fill to level mark with 2 pts. [illegible] Same Motor Oil crankcase grade

CRANKCASE VENTILATOR VALVE
When equipped with closed crankcase ventilating system [illegible] every 5000 miles

FUEL FILTER
Inspect fuel filter bowl and element, clean as required. Replace [illegible]

OIL FILTER
Replace oil filter element at least every 30[illegible] miles or more often [illegible] dusty

FRONT WHEEL BEARINGS
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions.

POWER BRAKE CYLINDER AIR CLEANER FELT
See General Instructions

CLUTCH RELEASE BEARING SLEEVE
Every 10,000 miles remove flywheel cover and lubricate sparingly with CONOCO SUPER LUBE.

SPRINGS
Equipped with friction inserts. Do not lubricate.

REAR WHEEL BEARINGS
Every 10,000 miles. Remove and replace plug

GAS TANK: 17 gals.

IMPORTED CARS Alfa Romeo thru Fiat

KEY

EP, HP, MP — Conoco Universal Gear Lubricant

MO — Conoco All-Season Super Motor Oil or Conoco Super Motor Oil

AF — Conoco Automatic Transmission Fluid, Type A

ALFA ROMEO

CRANKCASE	QUARTS	
1957-63 Giulietta 1300 series	6¼ ①	All temperatures, MO 10W-30
1960-63 2000 Roadster	7½ ①	
1963-66 Giulia 1600 series	6¾ ①	
2600 series	8¼ ①	

MANUAL TRANSMISSION	PINTS	
1957-63 Giulietta 1300 series Spider, Sprint	3	All temperatures, MO 40
Sprint Veloce, Super Spider	3	
1960-63 2000 Roadster	3½	
1963-66 Giulia 1600 series	3¾	
2600 series	3¾	

DIFFERENTIAL	PINTS	
1957-63 Giulietta 1300 series	3	All temperatures, EP 90
1960-63 2000 Roadster	6	
1963-66 Giulia 1600 series	3	
2600 series	5	

①Includes oil filter.

AUSTIN

CRANKCASE	QUARTS	
1957-59 A-55	4¼	MO: Above +32° 30; Above +10° 20W; Below +10° 10W
1959-62 A-55 Mark II	4½ ①	
A-40 series A2S6	4½	
1960-66 Mini, Mini Cooper, Cooper S 1275	5 ①②	
1962-64 A-60	4½ ①	

AUTOMATIC TRANSMISSION	QUARTS Initial Refill	QUARTS Total Refill	
1962-64 A-60	5½	6½	All temperatures, AF

MANUAL TRANSMISSION	PINTS Manual	PINTS O'drive	
1957-59 A-55	5½	7	All, MO 30 ex. Mini, Mini Cooper, Cooper S 1275
1959-62 A-40 series A2S6	2½	—	
A-55 Mark II	5½	—	
1960-66 Mini, Mini Cooper, Cooper S 1275	②	—	
1962-64 A-60	5½	—	

DIFFERENTIAL	PINTS	
1957-59 A-55	2½	MP: All ex. Mini, Mini Cooper, Cooper S 1275 Above +10° 90; Below +10° 80
1959-62 A-40 series A2S6	2	
A-55 Mark II	2¼	
1960-66 Mini, Mini Cooper, Cooper S 1275	②	
1962-64 A-60	2¾	

①Includes oil filter.
②Crankcase, transmission and differential combined. Capacity includes oil filter.

AUSTIN HEALEY

CRANKCASE	QUARTS	
1957-59 100 Six	7	MO: Above +41° 40; Above +10° 20W; Below +10° 10W; 10W-30
1958-66 Sprite Mark I, II, III	4①	
1960-66 3000 Mark I, II, III Convertible	7	

MANUAL TRANSMISSION	PINTS Manual	PINTS O'drive	
1957-62 100 Six, 3000 Mark I, II	6	7½	All temperatures, MO 30
1958-66 Sprite Mark I, II, III	2¾	—	
1963-66 3000 Mark II, III Convert.	7	8½	

DIFFERENTIAL	PINTS	
1957-66 All ex. Sprite	3½	MP: Above +10° 90; Below +10° 80
1958-66 Sprite Mark I, II, III	1¾	

①Includes oil filter.

AUTO UNION-DKW

ENGINE	QUARTS	
1957 Big DKW 3=6	①	WITHOUT RESERVOIR MO: When refueling, pour ½ quart oil in tank, then add 5 gallons of gasoline. Above +32°, 30; below +32°, 20W. WITH RESERVOIR MO: All temperatures, 10W-30. Capacity, 4 quarts
1957-63 AU-1000, -1000S, -1000Sp.	①	
1960-64 DKW-750, DKW Junior DeLuxe	①	

AUTO UNION-DKW Continued

TRANSAXLE	PINTS	
1957 DKW 3=6	5¼	MO 40 All ex. DKW-750, DKW Junior DeLuxe may use 20-20W
1957-63 AU-1000, -1000S, -1000Sp.	5¼	
1960-64 DKW-750, DKW Junior DeLuxe	3¾	

①Two-cycle engine, oil mixed with gasoline.

BMW

CRANKCASE	QUARTS	
1958-65 600, 700	2¼	All temperatures, MO 10W-30
1962-66 1600, 1800, 1800 TI	4½	

MANUAL TRANSMISSION	PINTS	
1962-66 1600, 1800, 1800 TI	2½	All temperatures, MP 80

TRANSAXLE	PINTS	
1958-65 600, 700	2½	All temperatures, MO 20-20W

DIFFERENTIAL	PINTS	
1957-65 2.6, 3.2	2¾	All temperatures, HP 90
1960-65 3.2 Super	3½	
1962-66 1600, 1800, 1800 TI	2	

CITROEN

CRANKCASE	QUARTS	
1957-58 2CV	2	All temperatures, MO 20-20W
1957-66 DS19, ID19, DS21	4	MO: Above +86° 30; Above 0° 20①; Below 0° 5W-20; 10W-30①; 5W-20
1963-66 AMI-6	2	

TRANSAXLE	PINTS	
1957-58 2CV	2	All temperatures, EP 80
1957-66 DS19, ID19, DS21	4	All temperatures, EP 90
1963-66 AMI-6	2	All temperatures, EP 80

①AMI-6, SAE No. 5W-20 below +10°.

DATSUN

CRANKCASE	QUARTS	
1961-66 Bluebird (P410-U, PL411-U)	3¼ ①	MO: Above +90° 30; Above +10° 20W; Below +10° 10W

MANUAL TRANSMISSION	PINTS	
1961-66 Bluebird (P410-U, PL411-U)	4	MP: Above +90° 140; Above +10° 90; Below +10° 80

DIFFERENTIAL	PINTS	
1961-66 Bluebird (P410-U, PL411-U)	2	MP: Above +90° 140; Above +10° 90; Below +10° 80

①With new disposable filter, add ½ quart.

FIAT

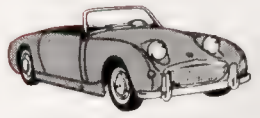
CRANKCASE	QUARTS		
1957-61 600, 600 Multipla	3¼	MO: Above +90° 40; Above +32° 30; Above +10° 20W; Below +10° 10W	10W-30; 10W-30; 10W-30
500, 500 Bianchina	2		
1957-66 1100, 1200 series	3¼		
1959-65 1500 Cabriolet, 1800, 1800B, 2100, 2300	4½		
1962-66 600D	4¼		
1964-66 1500 Spider	3¾		

MANUAL TRANSMISSION	PINTS Manual	PINTS O'drive	
1957-66 1100, 1200 series	2½	—	1100, 1200, 1500 Cabriolet, 1500 Spider, MO 40 or EP 90 All others, EP 90
1959-65 1500 Cabriolet, 1800, 1800B, 2100, 2300	2½	—	
1964-65 1500 Spider	3¼	5½	
1966 1500 Spider	2½		

TRANSAXLE	PINTS	
1957-61 500, 500 Bianchina	3½	All temperatures, EP 90
600, 600 Multipla	3¼	
1962-66 600D	3¼	

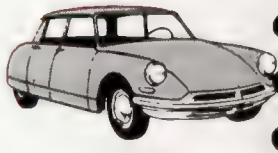
DIFFERENTIAL	PINTS	
1957-66 1100, 1200 series	1¼	All temperatures, EP 90
1959-65 1500 Cabriolet, 1800, 1800B, 2100, 2300	1¼ 2½	
1964-66 1500 Spider	2	

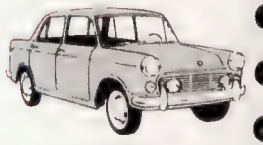

ALFA ROMEO


AUSTIN HEALEY SPRITE


DKW-750


BMW


CITROEN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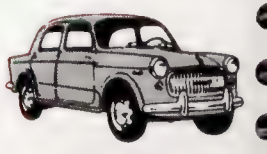

FIAT 1100

'Jeep' UNIVERSAL 4 CYL.—1946-'66; V-6—1966
(2WD and 4WD)

TUNE-UP DATA

See Service Instructions for Procedure

BATTERY

	AABM Group No.	Amp. Hrs.
1946-47	1 (6-volt)	100
1958 early	1 (6-volt)	105
1958 late, 1959-66	24H	50

COMPRESSION PRESSURE
(at cranking speed with throttle open)

	psi
L-head	90-110
F-head	120-130
V-6	*

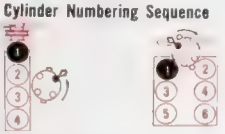
Variations should not exceed 10 psi
* Lowest reading cylinder must be more than 75% of the highest reading cylinder

SPARK PLUGS
4-cyl.: Autolite A7; Champion J-8. V-6: AC 44S; high speed driving or hauling trailers, 42 Commercial
Gap: 4-cyl., .030"; V-6, .035"
Torque: 4-cyl., 25-33 ft. lb.; V-6, 30 ft. lb.

IGNITION POINTS
Autolite
Gap: 4-cyl., .020"; V-6, .016"
Dwell angle: 4-cyl., 42°; V-6, 29°-31° (30° preferred)

CONDENSER
Autolite
Capacity: CJ-2A, -3A, .18-.26 mfd. CJ-3B, -5, -6, .21-.25 mfd. V-6, .18-.23 mfd

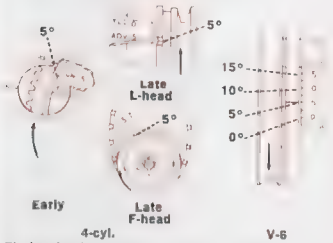
Cylinder Numbering Sequence



Firing Order: 4-cyl. 1, 3, 4, 2
V-6 1, 6, 5, 4, 3, 2

TIMING PROCEDURE
1. Bring engine to operating temperature
2. Connect tachometer
3. Connect timing light to No. 1 spark plug or distributor cap tower
4. Disconnect distributor vacuum line and tape manifold opening
5. Set idle speed with transmission in NEUTRAL
6. Observe timing at flywheel or crankshaft damper and turn distributor to obtain recommended setting
7. Reconnect vacuum line and reset to proper idle speed

Timing Mark and Setting



Timing Setting (Before Top Dead Center):
5° (On crankshaft damper or IGN mark on flywheel)

FUEL PUMP
4-cyl.: AC mechanical, various models. V-6: AC model JU
Pressure: CJ-2A, 4½ lb. at 1800 rpm; CJ-3A, -3B, -5, -6, 2½-3¾ lb. at 1800 rpm. V-6, 4-5¼ lb. at idle rpm
Volume: 4-cyl., 1 pint in 30 seconds or less at idle speed; V-6, not required

CARBURETOR ADJUSTMENT

	Idle Mixture (initial turns)	Choke (notches) Man. Trans.
CARTER		
1-bbl. WO	1¼	—
1-bbl. YF	¾-1¼	—
ROCHESTER		
1-bbl. 1BC	2	index
2-bbl. 2GC	1	index

ENGINE IDLE SPEED
4-cyl., 600 rpm; V-6, 550 rpm

VALVE CLEARANCES
(engine cold)
L-head: Intake .016"; exhaust .016"
F-head: Intake .018"; exhaust .016"
V-6: Hydraulic lifters

BRAKE ADJUSTMENT

with the brakes cold, if the brake pedal can be depressed more than 2", the need for service is indicated
Two adjustment cams are provided on each backing plate
Adjust the brakes as follows:
1. Turn adjustment cam until drum cannot be turned by hand
2. Back off adjustment cam until drum just turns freely without drag
3. Repeat steps 1 and 2 for other adjustment cam
4. Repeat procedure at each wheel

Bleeding sequence: RR, LR, RF, LF

KEY

- Conoco Super Lube
- Conoco Super Motor Oil SAE No. 20-20W
- Positions For Frame Engaging Lift Adapters
- (90) Conoco Universal Gear Lubricant SAE No. 90
- Service From Under Hood

UNLESS OTHERWISE RECOMMENDED, LUBRICATE ALL POINTS EVERY 1000 MILES OR DAILY IN FIELD SERVICE

FRONT AXLE (2½ pts.)
(Also includes Powr-Lok axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 80
Drain and refill: Every 12,000 miles or 300 hours, field service

UNIVERSAL JOINT AND STEERING KNUCKLE BEARINGS
Remove plug and fill. Every 6000 miles or 300 hours, field service disassemble, clean and repack

GOVERNOR (⅓ pt.)
Drain and refill when changing crankcase oil. Keep filled to plug level with CONOCO Super MOTOR OIL SAE No. 20W, Summer; SAE No. 10W, Winter. Without level plug, fill with 2 oz.

CRANKCASE (4 qts.)
Drain and refill: 2000 miles
See Page 1 for exceptions
Conoco All-Season Super Motor Oil SAE No.

Above 32°F.	10W-30
Above 0°F.	10W-30
Below 0°F.	5W-20

(V-6) Wash filler cap element in kerosene, dry and recoil with crankcase grade
Field service, drain 50 hours

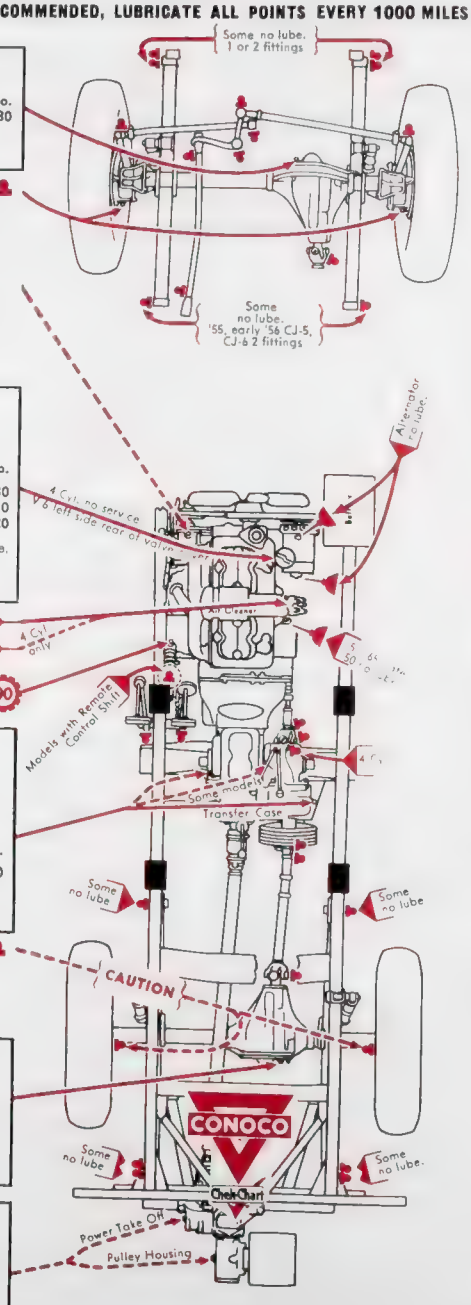
DISTRIBUTOR OIL CUP
DISTRIBUTOR CAM CENTER
Under rotor—4 drops on wick
STEERING GEAR (90)
Remove plug and fill

TRANSMISSION
2WD (1½ pts.) 4WD (3 pts.)
Opt. 4-Speed (6¾ pts.)
TRANSFER CASE (3½ pts.)
Individual drain and fill plugs
Conoco Universal Gear Lubricant SAE No.
All temperatures 90
Drain and refill: Every 12,000 miles or 300 hours, field service

REAR WHEEL BEARINGS
CAUTION: Apply lubricant sparingly until it appears at vent hole
Early '46 models, removal necessary. See "SPECIAL SERVICES"

REAR AXLE
2WD (2 pts.) 4WD (2½ pts.)
(Also includes Powr-Lok axle)
Conoco Universal Gear Lubricant SAE No.
All temperatures 80
Drain and refill: Every 12,000 miles or 300 hours, field service

POWER TAKE-OFF (1 pt.)
BELT PULLEY HOUSING (¾ pt.)
Conoco Universal Gear Lubricant SAE No.
All temperatures 80
Drain and refill: Every 12,000 miles or 300 hours, field service



COOLING SYSTEM: 4 Cyl. 11 qts. V-6 12 qts.

SPECIAL SERVICES

AIR CLEANER—OIL BATH TYPE
Clean base every [illegible] mark with CONOCO [illegible] (crankcase grade)

AIR CLEANER—DRY TYPE
Replace element every 10 000 m[illegible]

CRANKCASE VENTILATOR VALVE
(4 Cyl.) When equipped with [illegible] case ventilating [illegible] every 5000 m[illegible] 10,000 miles. Also [illegible]

FUEL FILTER
(4 Cyl.) Clean fuel filter [illegible] year (V-6) Clean fuel filter [illegible] every 10,000 miles.

OIL FILTER
Replace oil filter element at [illegible] 5000 miles or more often if oil be[illegible]

WHEEL BEARINGS
FRONT and early 1946 REAR
Clean and repack with CONOCO SUPER LUBE every 10,000 miles. See General Instructions

HYDRAULIC BRAKES—BRAKE CABLES—SPEEDOMETER CABLE
See General Instructions

SPRINGS
Equipped with friction inserts. Do not lubricate.

POWER TAKE-OFF UNIVERSAL JOINTS
Once a year. See General Instructions.

GAS TANK: 10½ gals.

IMPORTED CARS M.G. thru Saab

KEY

EP, HP, MP — Conoco Universal Gear Lubricant

MO — Conoco All-Season Super Motor Oil or Conoco Super Motor Oil

AF — Conoco Automatic Transmission Fluid, Type A

M.G.

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO
1959-62 Magnette Mark III	4½ (1)	Above +32° 30
1963-66 MG Sports Sedan	5¼ (1)	Above +10° 20W
		Below +10° 10W
1957-61 MGA 1500, 1600	4	
1958-61 MGA Twin Cam	7½	Above +41° 40
1961-62 MGA 1600 Mark II	4	Above +10° 20W 10W-30
1961-66 Midget Mark I, II	4 (1)	Below +10° 10W
1963-66 MGB	4	
MANUAL TRANSMISSION	PINTS	
1957-62 MGA 1500, 1600, 1600 Mark II, Twin Cam	5½	
1959-62 Magnette Mark III	5½	All temperatures, MO 30
1961-66 Midget Mark I, II	2¾	
1963-66 MGB	5½ (2)	
MG Sports Sedan	(3)	
DIFFERENTIAL	PINTS	
1957-62 MGA 1500, 1600, 1600 Mark II, Twin Cam	2¾	
1959-62 Magnette Mark III	2¾	MP
1961-66 Midget Mark I, II	1¾	Above +10° 90
1963-66 MGB	2¾	Below +10° 80
MG Sports Sedan	(3)	

(1) Includes oil filter. (2) With overdrive, 6 pints. (3) Combined with crankcase.

MORRIS

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO
1957-63 Minor 1000	4¼ (1)	Above +32° 30
1960-62 Oxford Mark V	4½ (1)	Above +10° 20W
Mini, Mini Cooper	5 (1) (2)	Below +10° 10W
MANUAL TRANSMISSION	PINTS	
1957-63 Minor 1000	3	
1960-62 Oxford Mark V	5½	All temperatures, MO 30
Mini, Mini Cooper	(2)	
DIFFERENTIAL	PINTS	
1957-63 Minor 1000	2	MP
1960-62 Oxford Mark V	2½	Above +10° 90
Mini, Mini Cooper	(2)	Below +10° 80

(1) Includes oil filter. (2) Crankcase, transmission and differential combined

NSU

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	
1958-61 Prinz, Prinz 30, Sport Prinz	3 (1)	MO Above +90° 30 10W-30; Above +32° 20W 10W-30; Below +32° 10W 10W-30
1962-65 Prinz 4, Sport Prinz	3 (1)	
1964-65 Prinz 1000L	3	All temperatures, 20-20W, 10W-30
1965-66 Wankel Spider	5	All temperatures, 10W-30
1966 1000S, -TT, Typ 110	3	
MANUAL TRANSMISSION	PINTS	
1958-65 All ex. Prinz 1000L	(1)	
1964-66 1000S, -TT, Prinz 1000L	3	All temperatures, MP 80
1965-66 Wankel Spider, Typ 110	3	
DIFFERENTIAL	PINTS	
1958-65 All ex. Prinz 1000L	(1)	
1964-66 1000S, -TT, Prinz 1000L	(2)	All temperatures, MP 80
1965-66 Wankel Spider, Typ 110	(2)	

(1) Crankcase, transmission and differential combined. (2) Transmission and differential combined

OPEL

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	
1958-63 All ex. Kadett	3	MO Above 0° 20W; Below 0° 10W
1963-66 Kadett	2½	MO Above +32° 20-20W 10W-30; Above 0° 10W 5W-20; Below 0° 5W-20 5W-20

OPEL Continued

MODEL	CAPACITY	LUBRICANT
MANUAL TRANSMISSION	PINTS	
1958-63 All ex. Kadett	2	All temperatures, MP 80
1963-66 Kadett	1¼	All temperatures, MP 90 (1)
DIFFERENTIAL	PINTS	
1958-63 All ex. Kadett	2	All temperatures, MP 90
1963-66 Kadett	1	

(1) MO SAE No. 40 or 50 may be used.

PEUGEOT

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO
1959-66 403	4¼ (1)	Above +90° 40
1961-66 404	4¼ (1)	Above +32° 40,30
		Above +10° 30,20W 10W-30
		Below +10° 10W 10W-30
MANUAL TRANSMISSION	PINTS	
1959-60 403	3¼	MO 30 or 40
1961-66 403, 404	3	
DIFFERENTIAL	PINTS	
1959-66 403 sedan	3	MO
Station wagon	3½	Above +32° 70
1961-66 404	3½	Below +32° 50

(1) Includes oil filter.

PORSCHE

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO
1957-65 All ex. Carrera	3¼	Above +85° 40; Above +32° 30; Above − 5° 20W; Below − 5° 10W
1966 911	9½	Above +32° 30
912	3¼	Below +32° 20W
TRANSAXLE	PINTS	HP
1957-65 All ex. Carrera	7 (1)	Above +32° 90
		Below +32° 80
1966 911, 912	5¼	All temperatures, HP 90

(1) Maintain level ½ inch below bottom edge of fill plug hole.

RENAULT

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO
1957-61 4CV	2	Above +32° 20W 10W-30
1957-66 Caravelle, Dauphine, Gordini	2½	Above +10° 10W 10W-30; Below +10° 5W-20 5W-20
1963-66 Caravelle, R-8	2½	Above +10° 10W-30; Below +10° 5W-20
TRANSAXLE	PINTS	
1957-66 All with 3 plugs on bottom	2¼	All temperatures, EP 80
2 plugs on bottom	3 (1)	
1963-66 Caravelle, R-8	3 (1)	

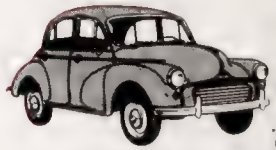
(1) Dauphine R.1095, Caravelle R.1133 and R-8 R.1132 with type 330 transaxle, 4 pints.

SAAB

MODEL	CAPACITY	LUBRICANT
ENGINE	QUARTS	
1957-66 93, 93B, 93F, 95, 96, GT-750	(1)	Add 1 quart MO 30 to each 7 or 8 gallons of gasoline. Premium gasoline is recommended for model GT-750. Below +32° dilute oil with gasoline in ratio 1-to-1 before pouring into tank
1963-66 95, 96 Special, GT-850, MC-850	3	Reservoir, MO 30
TRANSAXLE	PINTS	MP
1957-62 93, 93B, 93F, 95, 96, GT-750	4	Above +32° 90 (2)
1963-66 All	3	Below +32° 80

(1) Two-cycle engine, pour oil in tank, then add gasoline. (2) 4-speed, all temperatures, SAE No. 80.

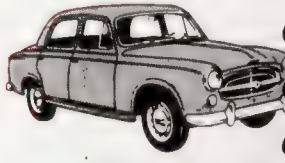
MGA



MORRIS MINOR

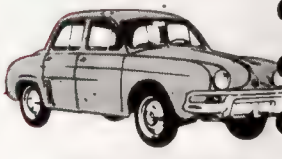
NSU SPORT PRINZ

OPEL



PEUGEOT 403

PORSCHE



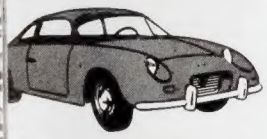
RENAULT DAUPHINE

SAAB 96

FORD ANGLIA

HILLMAN MINX

JAGUAR XK-150



LANCIA

MERCEDES-BENZ 190SL

METROPOLITAN

IMPORTED CARS Ford thru Metropolitan

CONOCO

KEY

EP, HP, MP — Conoco Universal Gear Lubricant

MO — Conoco All-Season Super Motor Oil or Conoco Super Motor Oil

AF — Conoco Automatic Transmission Fluid, Type A

FORD

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO
1957-62 Consul	3½	Above +32° 20-20W; Above −10° 10W; Below −10° 5W-20
Zephyr, Zodiac	4¼	
1963-65 Zephyr 6, Zodiac	4¼	
1957-59 Anglia, Prefect	2	Above +90° 30; Above +32° 20W; Above −10° 10W; Below −10° 5W-20
1957-60 Escort, Squire	2	
1960-65 early Anglia, Cortina 1200, Consul 315, Capri	2¾ ①	Above +32° 20-20W; Above −10° 10W; Below −10° 5W-20
Cortina 1500	4 ①	
1965 late -66 Anglia	3¼	
Cortina, Cortina GT	4½	
AUTOMATIC TRANSMISSION	QUARTS Initial Refill / Total Refill	
1957-62 Zephyr, Zodiac	6 / 8½	All temperatures, AF
1963-65 Zephyr 6, Zodiac	6 / 7½	
1965-66 Cortina	5¼ / 6¾	
MANUAL TRANSMISSION	PINTS Manual / O'drive	
1957-60 Anglia, Prefect, Escort, Squire (100E)	2 / —	All temperatures, EP 80
1957-62 Consul, Zephyr, Zodiac	3 / 3½	
1960-66 Anglia (105E), (106E)	2¼ / —	
1962-66 Consul 315, Capri, Cortina	2¼ / —	
1963-65 Zephyr 6, Zodiac	4¾ / 5¼	
DIFFERENTIAL	PINTS	
1957-60 Anglia, Prefect, Escort, Squire (100E)	1¾	Anglia ex. (105E); Prefect, Escort, Squire, all temperatures, EP 90
1957-62 Consul, Zephyr, Zodiac	3	Anglia (105E), Consul, Zephyr, Zodiac HP: Above −10° 90; Below −10° 80
1960-66 Anglia (105E), (106E)	2½	
1962-66 Consul 315, Capri, Cortina	2½	
1963-65 Zephyr 6, Zodiac	2	

①Manufacturer recommends filling 1960-65 early models to 1966 capacities.

HILLMAN

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO: Above +70° 30④; Above +20° 20W 10W-30; Above +5° 10W 10W-30; Below +5° 5W-20 5W-20
1957-66 Husky series I	3¾	
Minx I, II, III, III-A, -B, -C, V; Husky series II, III	4¼ ①	
1962-66 Super Minx Mark I, II, III	4¼ ①	
1966 Super Minx IV	4¾ ①	
AUTOMATIC TRANSMISSION	QUARTS	MO: Above 0° 10W-30; Below 0° 5W-20
1960-63 Easidrive	②	
1963-66 Borg-Warner	6½	All temperatures, AF
MANUAL TRANSMISSION	PINTS	MO: Above −10° 30⑤; Below −10° 20W⑤
1957-66 Minx I, II, III, III-A, -B, -C, V; Super Minx Mark I, II; Husky series I, II, III	3½	
1966 Super Minx III, IV	4¼	
DIFFERENTIAL	PINTS	EP: Above −10° 90③; Below −10° 80
1957-66 All	2	

①Includes oil filter. ②3¼ pints. ③Spiral bevel, SAE No. 140 above +32°. ④SAE No. 40 for continuous high speed driving, particularly in hot weather. ⑤Super Minx Mark III, IV; Minx series V, Husky series III with fully synchronized 4-speed transmission, SAE No. 10W-30.

JAGUAR

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO: Above +90° 40 10W-30; Above +32° 30 10W-30; Below +32° 20W 10W-30
1957-62 Mark VII, VIII, IX	11½ ①	
1957 XK-140	11½ ①	
1957-65 2.4, 3.4, 3.8 Liter	6½ ①	
1958-61 XK-150, XK-150S	7¾ ①	
1962-65 "E" Type	9 ①	
Mark X, 3.8 "S"	7¼ ①	
AUTOMATIC TRANSMISSION	QUARTS Initial Refill / Total Refill	
1957-65 All	6 / 9	All temperatures, AF

JAGUAR Continued

MODEL	CAPACITY	LUBRICANT
MANUAL TRANSMISSION	PINTS Manual / O'drive	
1957-65 All ex. 4.2 Liter "E" Type	3 / 4¾	All temperatures, MO 30
1965 4.2 Liter "E" Type	3 / —	All temperatures, HP 90
DIFFERENTIAL	PINTS	
1957-62 Mark VII, VIII, IX	4½	All temperatures, HP 90
1957-61 XK-140, -150, -150S	4¼	
1957-65 2.4, 3.4, 3.8 Liter "E" Type	3¼ ②	
1962-65 Mark X, 3.8 "S"	3¼	

①Includes oil filter. ②Early 2.4 Liter, 2¾ pints.

LANCIA

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	
1958-59 Aurelia	5¼	All temperatures, MO 10W-30
1958-65 Flaminia	6½	
1959-62 Appia, 2nd and 3rd series	4	
1962-65 Flavia	6	
MANUAL TRANSMISSION	PINTS	
1958-59 Aurelia	9½ ①	All temperatures, MP 90
1958-65 Flaminia	8¾ ①	
1959-62 Appia, 2nd and 3rd series	3	
1962-65 Flavia	4 ①	
DIFFERENTIAL	PINTS	
1958-65 Aurelia, Flaminia, Flavia	①	1959-62 Appia, 2nd and 3rd series, Conventional, all temperatures, MP 140
1959-62 Appia, 2nd and 3rd series	3½	

①Differential combined with transmission.

MERCEDES-BENZ 1957-66

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO: Above +90° 30; Above +32° 20W①; Above −10° 10W①; Below −10° 5W-20
180, 190 series, 200, 200D	4¼	
219, 220S, 220SE	6¼	
220b, 220Sb, 220SEb, 230S, 230SL	5¾	
300SE	6½	
AUTOMATIC TRANSMISSION	QUARTS Initial Refill / Total Refill	
190c; 200, -D; 220b, -Sb, -SEb; 230, -S, -SL	3 / 4	All temperatures, AF
300SE	3 / 5¼	
MANUAL TRANSMISSION	PINTS	
All	3	All temperatures, AF
DIFFERENTIAL	PINTS	
180a, 180b, 180D, 180Db, 219, 220S, 220SE; 190 series ex. 190c, 190Dc	4¼	All temperatures, HP 90
190c, -Dc; 200, -D; 220b, -Sb, -SEb; 230, -S, -SL	5¼	
300SE	5¼	

①All except 190c, -Dc, 200,-D, 220b, -Sb, -SEb, 230S-SL, 300SE after 31,000 miles, use one grade heavier; 300SE, SAE No. 10W below −10°. 190c, -Dc, 220b, -Sb, -SEb, 230S, 230SL, 300SE may also use SAE No. 10W-30 from +90° to −10°.

METROPOLITAN

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO: Above +32° 30①10W-30; Above +10° 20W 10W-30; Normally below +10° 10W 10W-30
1957-62 1500 series	4	
MANUAL TRANSMISSION	PINTS	MO: Above 0° 30; Below 0° 20W
1957-62 1500 series	5½	
DIFFERENTIAL	PINTS	
1957 1500 series	2	MP: Above +10° 90; Below +10° 80
1958-62 1500 series	2¼	

①For high speeds in hot weather, SAE No. 40.

IMPORTED CARS M.G. thru Saab

KEY

EP, HP, MP — Conoco Universal Gear Lubricant

MO — Conoco All-Season Super Motor Oil or Conoco Super Motor Oil

AF — Conoco Automatic Transmission Fluid, Type A

M.G.

MODEL	CAPACITY	LUBRICANT
CRANKCASE	QUARTS	MO
1959-62 Magnette Mark III	4½ ①	Above +32° 30
1963-66 MG Sports Sedan	5¼ ①	Above +10° 20W
		Below +10° 10W
1957-61 MGA 1500, 1600	4	
1958-61 MGA Twin Cam	7½	Above +41° 40
1961-62 MGA 1600 Mark II	4	Above +10° 20W 10W-30
1961-66 Midget Mark I, II	4 ①	Below +10° 10W
1963-66 MGB	4	
MANUAL TRANSMISSION	PINTS	
1957-62 MGA 1500, 1600, 1600 Mark II, Twin Cam	5½	
1959-62 Magnette Mark III	5½	All temperatures, MO 30
1961-66 Midget Mark I, II	2¾	
1963-66 MGB	5½ ②	
MG Sports Sedan	③	
DIFFERENTIAL	PINTS	
1957-62 MGA 1500, 1600, 1600 Mark II, Twin Cam	2¾	MP
1959-62 Magnette Mark III	2¾	Above +10° 90
1961-66 Midget Mark I, II	1¾	Below +10° 80
1963-66 MGB	2¾	
MG Sports Sedan	③	

①Includes oil filter. ②With overdrive, 6 pints. ③Combined with crankcase.

MORRIS

	QUARTS	MO
CRANKCASE		
1957-63 Minor 1000	4¼ ①	Above +32° 30
1960-62 Oxford Mark V	4½ ①	Above +10° 20W
Mini, Mini Cooper	5 ① ②	Below +10° 10W
MANUAL TRANSMISSION	PINTS	
1957-63 Minor 1000	3	
1960-62 Oxford Mark V	5½	All temperatures, MO 30
Mini, Mini Cooper	②	
DIFFERENTIAL	PINTS	
1957-63 Minor 1000	2	MP
1960-62 Oxford Mark V	2½	Above +10° 90
Mini, Mini Cooper	②	Below +10° 80

①Includes oil filter. ②Crankcase, transmission and differential combined.

NSU

	QUARTS	MO
CRANKCASE		
1958-61 Prinz, Prinz 30, Sport Prinz	3 ①	Above +90° 30 10W-30
1962-65 Prinz 4, Sport Prinz	3 ①	Above +32° 20W 10W-30
		Below +32° 10W 10W-30
1964-65 Prinz 1000L	3	All temperatures, 20-20W, 10W-30
1965-66 Wankel Spider	5	All temperatures, 10W-30
1966 1000S, -TT, Typ 110	3	
MANUAL TRANSMISSION	PINTS	
1958-65 All ex. Prinz 1000L	①	All temperatures, MP 80
1964-66 1000S, -TT, Prinz 1000L	3	
1965-66 Wankel Spider, Typ 110	3	
DIFFERENTIAL	PINTS	
1958-65 All ex. Prinz 1000L	①	All temperatures, MP 80
1964-66 1000S, -TT, Prinz 1000L	②	
1965-66 Wankel Spider, Typ 110	②	

①Crankcase, transmission and differential combined. ②Transmission and differential combined

OPEL

	QUARTS	MO
CRANKCASE		
1958-63 All ex. Kadett	3	Above 0° 20W
		Below 0° 10W
		MO
1963-66 Kadett	2½	Above +32° 20-20W 10W-30
		Above 0° 10W 5W-20
		Below 0° 5W-20 5W-20

OPEL Continued

	PINTS	
MANUAL TRANSMISSION		
1958-63 All ex. Kadett	2	All temperatures, MP 80
1963-66 Kadett	1¼	All temperatures, MP 90 ①
DIFFERENTIAL	PINTS	
1958-63 All ex. Kadett	2	All temperatures, MP 90
1963-66 Kadett	1	

①MO SAE No. 40 or 50 may be used.

PEUGEOT

	QUARTS	MO
CRANKCASE		
		Above +90° 40
1959-66 403	4¼ ①	Above +32° 40,30
1961-66 404	4¼ ①	Above +10° 30,20W 10W-30
		Below +10° 10W 10W-30
MANUAL TRANSMISSION	PINTS	
1959-60 403	3¼	MO 30 or 40
1961-66 403, 404	3	
DIFFERENTIAL	PINTS	
1959-66 403 sedan	3	MO
Station wagon	3½	Above +32° 70
1961-66 404	3½	Below +32° 50

①Includes oil filter.

PORSCHE

	QUARTS	MO
CRANKCASE		
		Above +85° 40
		Above +32° 30
1957-65 All ex. Carrera	3¼	Above − 5° 20W
		Below − 5° 10W
1966 911	9½	Above +32° 30
912	3¼	Below +32° 20W
TRANSAXLE	PINTS	HP
1957-65 All ex. Carrera	7 ①	Above +32° 90
		Below +32° 80
1966 911, 912	5¼	All temperatures, HP 90

①Maintain level ½ inch below bottom edge of fill plug hole.

RENAULT

	QUARTS	MO
CRANKCASE		
1957-61 4CV	2	Above +32° 20W 10W-30
1957-66 Caravelle, Dauphine, Gordini	2½	Above +10° 10W 10W-30
		Below +10° 5W-20 5W-20
1963-66 Caravelle, R-8	2½	Above +10° 10W-30
		Below +10° 5W-20
TRANSAXLE	PINTS	
1957-66 All with 3 plugs on bottom	2¼	
2 plugs on bottom	3 ①	All temperatures, EP 80
1963-66 Caravelle, R-8	3 ①	

①Dauphine R.1095, Caravelle R.1133 and R-8 R.1132 with type 330 transaxle, 4 pints.

SAAB

	QUARTS	
ENGINE		
1957-66 93, 93B, 93F, 95, 96, GT-750	①	Add 1 quart MO 30 to each 7 or 8 gallons of gasoline. Premium gasoline is recommended for model GT-750. Below +32° dilute oil with gasoline in ratio 1-to-1 before pouring into tank
1963-66 95, 96 Special, GT-850, MC-850	3	Reservoir, MO 30
TRANSAXLE	PINTS	MP
1957-62 93, 93B, 93F, 95, 96, GT-750	4	Above +32° 90 ②
1963-66 All	3	Below +32° 80

①Two-cycle engine, pour oil in tank, then add gasoline. ②4-speed, all temperatures, SAE No. 80.


MGA

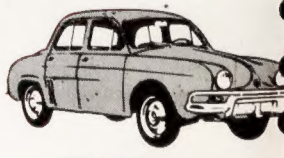

MORRIS MINOR


NSU SPORT PRINZ


OPEL


PEUGEOT 403


PORSCHE

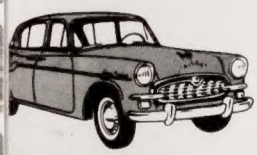

RENAULT DAUPHINE


SAAB 96

IMPORTED CARS Simca thru Volvo

SIMCA ARONDE

SUNBEAM RAPIER



TOYOTA

TRIUMPH TR3-A

VAUXHALL VICTOR

VOLKSWAGEN

VOLVO

KEY ➡ **EP, HP, MP** } Conoco Universal Gear Lubricant — **MO** { Conoco All-Season Super Motor Oil or Conoco Super Motor Oil — **AF** Conoco Automatic Transmission Fluid, Type A

SIMCA

MODEL	CAPACITY	LUBRICANT
CRANKCASE	**QUARTS**	**MO**
1957-61 Aronde	5	Above +32° 30 10W-30
1957-59 Ariane 4-cyl.	5	Above +10° 20W 10W-30
8-cyl.	4½	Above −10° 10W 5W-20
1957-60 Vedette	4½	Below −10° 5W-20 5W-20
1962-63 Simca 5	5	
1962-66 1000	2¾	Above +32° 30 10W-30 Above +10° 10W 10W-30 Above −10° 10W 5W-20 Below −10° 5W-20 5W-20
MANUAL TRANSMISSION	**PINTS**	
1957-63 4-cyl.	2¼	All temperatures, **MP** 80
8-cyl.	3¼	
TRANSAXLE	**PINTS**	**MP**
1962-66 1000	4	Above +10° 90 Below +10° 80
DIFFERENTIAL	**PINTS**	**MP**
1957-63 4-cyl.	2	Above +20° 90
8-cyl. ex. Marly	2½	Below +20° 80
Marly	3	

SUNBEAM

	CAPACITY	LUBRICANT
CRANKCASE	**QUARTS**	**MO**
1957-62 Rapier, All	4¼ ①	Above +70° 30③ 10W-30
1959-66 Alpine series I, II, III, IV	4¼ ①	Above +20° 20W 10W-30
1964-66 Imp	3¼ ①	Above 0° 10W 5W-20
1966 Alpine series V	4¾ ①	Below 0° 5W-20 5W-20
1965-66 Minx series V	4¼ ①	
1966 Minx series VI	4¾ ①	
AUTOMATIC TRANSMISSION	**QUARTS** Initial Refill / Total Refill	
1964-66 Alpine series IV	5½ / 6½	All temperatures, **AF**
1965-66 Minx series V, VI	— / 6½	
MANUAL TRANSMISSION	**PINTS** Manual / O'drive	**MO**
1957-62 Rapier, All	3¼ / 4¾	Above −10° 30④
1959-65 Alpine series I, II, III	3¼ / 4¾	Below −10° 20W④
1965-66 Alpine series IV, V	4¼⑤ / 5½⑤	
Minx series V, VI	4¼ / —	
TRANSAXLE	**PINTS**	**MP**
1964-66 Imp	5½	Above +68° 80 or 90 Below +68° 80
DIFFERENTIAL	**PINTS**	**EP**
1957-66 All	2	Above −10° 90② Below −10° 80

①Includes oil filter.
②Spiral bevel, SAE No. 140 above +32°.
③SAE No. 40 for continuous high speed driving, especially in hot weather.
④Alpine series V, series IV and Minx series V, VI with fully synchronized transmission, SAE No. 10W-30.
⑤Early series IV, 3¼ pints; with overdrive, 4¾ pints.

TOYOTA

	CAPACITY	LUBRICANT
CRANKCASE	**QUARTS**	**MO**
1965-66 Crown RS41L, RS46LG	4¼	Above +90° 40
1965 Tiara	4¼	Above +32° 30
		Below +32° 20W
1965-66 Corona RT43L, RT43L-C	4¼	Above +90° 30 10W-30 Above +20° 20W 10W-30 Below −10° 10W 10W-30
MANUAL TRANSMISSION	**PINTS** Manual / O'drive	
1965-66 Crown RS41L, RS46LG	4 / —	**MP**
Corona RT43L, RT43L-C	4 / —	Above +10° 90
1965 Tiara	1¾ / —	Below +10° 80
DIFFERENTIAL	**PINTS**	**MP**
1965-66 Crown, Corona	2	Above +10° 90
1965 Tiara	2½	Below +10° 80

TRIUMPH

	CAPACITY	LUBRICANT
CRANKCASE	**QUARTS**	**MO**
1957-66 TR2, TR3, TR3-A, TR3-B, TR4, TR4-A	6	Above +70° 40 Above +40° 30 10W-30 Above +10° 20W 10W-30 Below +10° 10W 10W-30
1958-61 TR10 sedan, Estate Wagon	4	Above +80° 30
1960-65 Herald, Triumph 1200	4	Above +30° 20W 10W-30
1963-66 Sport Six, Spitfire, Spitfire Mark 2	4	Below +30° 10W 10W-30
MANUAL TRANSMISSION	**PINTS** Manual / O'drive	
1957-66 TR2, TR3, TR3-A, TR3-B, TR4, TR4-A	1¾ / 3¼	**HP**
1958-61 TR10 sedan, Estate Wagon	1¾ / —	Above +30° 90
1960-65 Herald, Herald 1200	1¾ / —	Below +30° 80
1963-66 Sport Six, Spitfire, Spitfire Mark 2	1¾ / 2¾	
DIFFERENTIAL	**PINTS**	
1957-66 TR2, TR3, TR3-A, TR3-B, TR4, TR4-A	1¾	**HP**
1958-61 TR10 sedan, Estate Wagon	1¾	Above +30° 90
1960-65 Herald, Triumph 1200	1¼	Below +30° 80
1963-66 Sport Six, Spitfire, Spitfire Mark 2	1¼	

VAUXHALL

	CAPACITY	LUBRICANT
CRANKCASE	**QUARTS**	**MO**
1958-62 Victor	3½	Above +32° 20W 10W-30 Above 0° 10W 10W-30 Below 0° 5W-20 5W-20
MANUAL TRANSMISSION	**PINTS**	**MP**
1958-62 Victor	2½	Above 0° 90 Below 0° 80
DIFFERENTIAL	**PINTS**	
1958-62 Victor	3	All temperatures, **HP** 90

VOLKSWAGEN

	CAPACITY	LUBRICANT
CRANKCASE	**QUARTS**	**MO**
1957-66 1200, 1300 series; truck, station wagon	2½	Above +90° 30 10W-30 Above +32° 20W② 10W-30 Above −10° 10W 10W-30 Below −10° 5W-20 5W-20
1962-66 1500, 1600 series	2½	Above +32° 30 Above −10° 10W Below −10° 5W-20
TRANSAXLE	**PINTS**	
1957-59 Truck, station wagon	4¼ ①	**MP**
1957-60 1200, 1300 series	4¼	Above +14° 90
1960-66 Truck, station wagon	5¼ ①	Below +14° 80
1961-66 1200, 1300, 1500, 1600 series	5¼	

①Rear wheel gear cases, ½ pint each.
②1300, 1500 series, truck and station wagon with 1500 engine, use SAE No. 30.

VOLVO

	CAPACITY	LUBRICANT
CRANKCASE	**QUARTS**	**MO**
1957-62 All ex. B18 engine	3	Above +90° 10W-30③ 30
1962-66 B18 engine	3½	Above +32° 10W-30③ 20W
		Below +32° 10W-30③ 10W
AUTOMATIC TRANSMISSION	**QUARTS** Initial Refill / Total Refill	
1964-66 122S	5½ / 6½	All temperatures, **AF**
MANUAL TRANSMISSION	**PINTS** Manual / O'drive	**MO**④
1957-62 3-speed	1½ ① / —	Above +32° 40
1958-66 4-speed	1½ ① / 3¾ ②	Below +32° 20W
DIFFERENTIAL	**PINTS**	**MP**
1957-66 All	2¾	Above +32° 90 Below +32° 80

①Early models with 3-speed nonsynchronized 1st speed, 1 pint; early 4-speed, 2 pints.
②P1800 with overdrive.
③SAE No. 10W-30 preferred.
④P-1800 with overdrive, SAE No. 30 all temperatures.

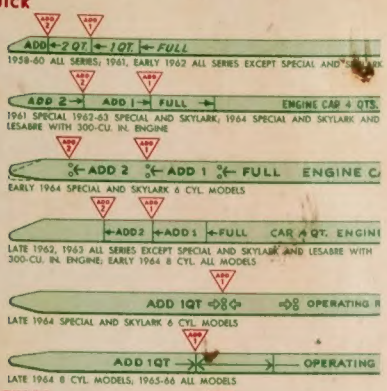
A FULL CRANKCASE—FULL PROTECTION

—Add 1 Quart —Add 2 Quarts

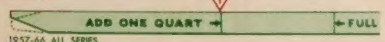
Today's cars with their high performance engines demand the most from motor oil to provide lubrication, cooling, cleansing and sealing of the engine's operating parts. Because the modern engine has a smaller crankcase, keeping the oil at the FULL mark is extremely important for full protection.

This Crankcase Dipstick Chart shows the amount of make-up oil needed, since the position of every triangle on the chart indicates the number of quarts to be added.

BUICK



CADILLAC



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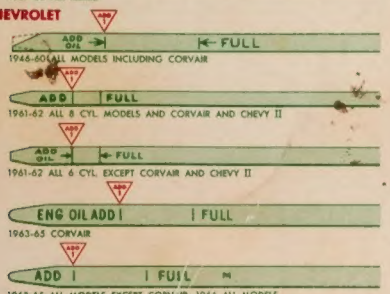
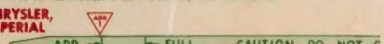
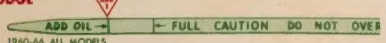


CHRYSLER, IMPERIAL



DODGE



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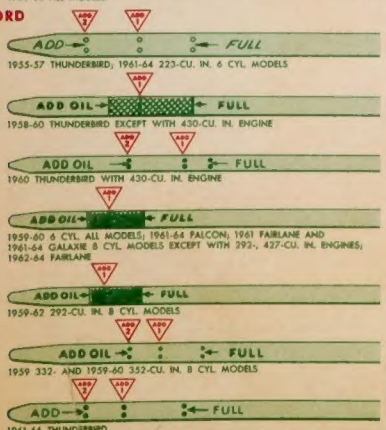

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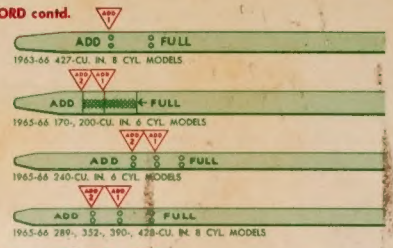

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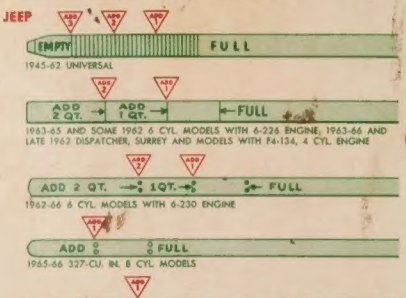
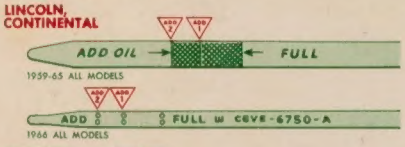
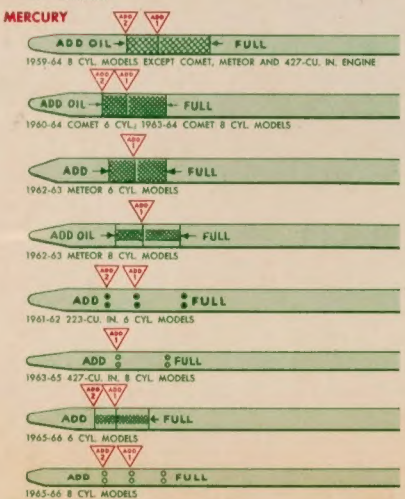


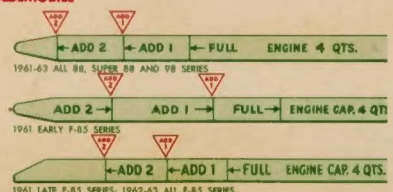
LINCOLN, CONTINENTAL



MERCURY



OLDSMOBILE



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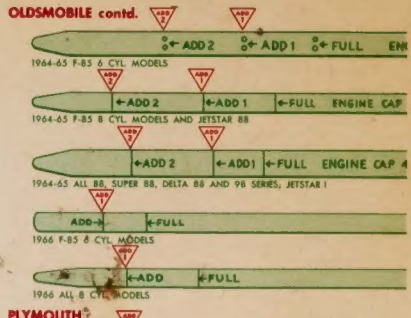
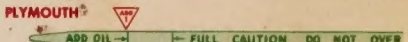
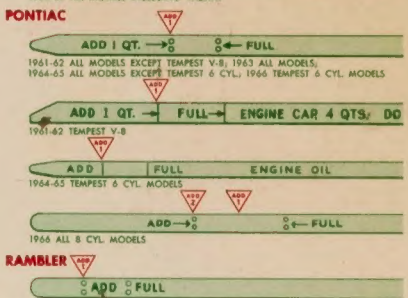


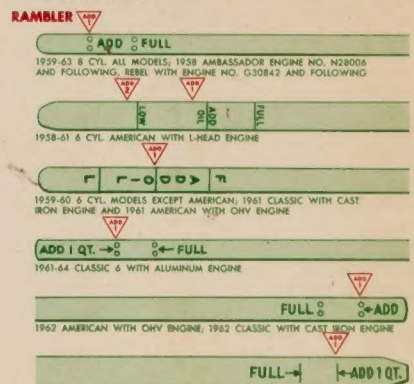
PLYMOUTH



PONTIAC



RAMBLER



STUDEBAKER